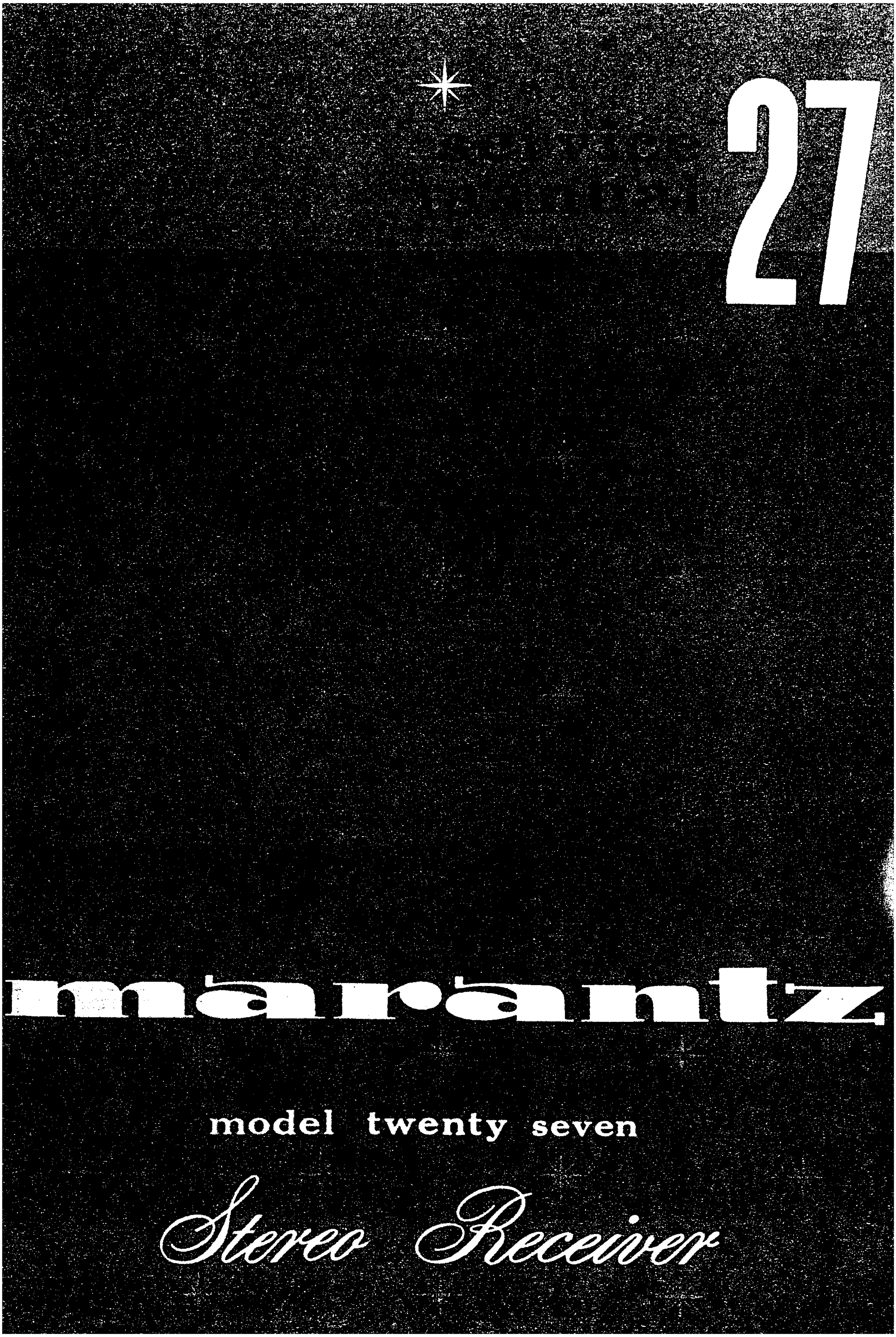


[illegible]

27

marantz

model twenty seven

Stereo Receiver

TABLE OF CONTENTS

PAGE

Introduction 1

Service Note 1

AM Tuner 2

FM Tuner 3

FM and AM Tuner Alignment 6

Phono Amplifier 9

Tone Amplifier 9

Power Amplifier 10

Regulated Power Supply 13

Test Equipment for Servicing 14

Parts List .... 23~29

LIST OF ILLUSTRATIONS

FIGURE PAGE

1 . Main Chassis Adjustment and Component Locations 15

2 . Main Chassis Adjustment and Component Locations 15

3 . Rear Panel Adjustment and Component Locations 16

4 . AM/FM Front End Assembly P100 Component Locations 16

5 . AM/FM IF Amplifier and FM MPX Assembly P200 Component Locations .. 17

6 . Equalizing Amplifier Assembly P300 Component Locations 17

7 . Pre-Amplifier Assembly P400 Component Locations 18

8 . Tone Control Assembly P900 Component Locations 18

9 . Temperature Sensitive Diode Assembly P700 Component Locations 19

10. Loudness and Low Filter Assembly P800 Component Locations 19

11. Main Amplifier Assembly P500 Component Locations 20

12. Power Supply Assembly P600 Component Locations 21

13. Dial Stringing Diagram 21

14. Schematic Diagram 22

INTRODUCTION

This service manual was prepared for use by Authorized Warranty Stations and contains service data for the Marantz Model 27 Stereophonic Receiver.

Servicing information and voltage data included in this manual are intended for use by knowledgeable and experienced technicians only. All instructions should be read carefully. No attempt should be made to proceed without a good understanding of the operation of the set. A brief functional description and associated block diagram, furnished in the Operating Instruction Manual for the Model 27 Receiver, provide functional data about the set as an aid in this understanding.

The parts list furnishes information by which replacement parts may be ordered from the Marantz Company. A description is included for parts which can usually be obtained through local suppliers.

1. SERVICE NOTES

As can be seen from the circuit diagram, the chassis of the Model 27 consists of the following units. Each unit mounted on a printed circuit board is circumscrided by a bold dotted line on the circuit diagram.

1. FM Front End and AM Front End ··················mounted on PC board P100
2. FM/AM IF Amplifier and FM MPX Stereo Demodulator
   ··················mounted on PC board P200
3. Phono Amplifier ··················mounted on PC board P300
4. Tone Amplifier ··················mounted on PC board P400
5. Main Amplifier ··················mounted on PC board P500
6. Rectifiers and Regulated Power Supply ··················mounted on PC board P600
7. Dynamic Bias Control Unit··················mounted on PC board P700
8. Low Filter and Loudness Control Unit ··················mounted on PC board P800
9. Tone Control Unit ··················mounted on PC board P900

2 . AM TUNER

2.1.Circuit Description

The AM tuner consists of two units, a front end unit mounted on a part of PC board P100 and IF amplifier unit mounted on a part of PC board P200.

The front end consists of an RF amplifier and a converter. AM signals induced in a ferrite rod antenna L001 are applied to the base of RF amplifier transistor H104 and amplified to the level high enough to overcome the converter noise. The tuning circuits placed in the input and the output circuits of the RF amplifier provide very high image ratio and sufficient suprious rejection. Thus amplified and selected signal is applied to the base of converter transistor H105. The converter forms a collector-emitter self-oscillation circuit and the local oscillation signal appears at the emitter of H105. Both the signals are then mixed at the base-emitter junction and converted into 455KHz intermediate frequency. The IF signal obtained from the collector of H105 is applied to the first IF transformer L109.

Diode H106, reverse-biased by resistors R115 and R116, eliminates signal overload distortion without sacrificing any receiving sensitivity.

The IF signal output is led to the IF amplifier consisting of two stages H203 and H204, which are shared with FM IF amplifier, and are amplified to high level. The amplified IF output is applied to diode H220 to detect audio signal. Then the detected audio signal is led to output pin J204 through filtering network. The DC component of the detected IF signal is used for AGC which affects the emitter current of H203 and RF amplifier transistor H104. A part of IF signal output is also applied to diode H219 through capacitor C224 and rectified into DC current for energizing signal strength meter M001.

2.2. Suggestions for Trouble Shooting of AM Tuner

Symptom: No AM Reception

First try to tune to stations by rotating a flywheel tuning knob slowly and observe the signal strength meter whether it deflects or not. If the signal strength meter gives a deflection at several frequencies received, no failure exists in the stages at least preceding IF transformer L206. Next connect an oscilloscope to tuner output pin J204, and check audio signal. If the signal strength meter does not deflect, check the local oscillator circuit. Normal oscillation voltage at the hot end of the oscillator capacitor is 2 to 3 volts, varying with the tuning capacitor position. When measuring oscillation voltage use an RF VTVM, no circuit tester gives correct indication. If the local oscillation voltage is normal, check all voltage distributions in the tuner circuit by using a circuit tester and compare the measured values with those written in the schematic diagram.

3. FM TUNER

3.1. Circuit Description

The FM section consists of four parts, FM front end, IF amplifier, MPX stereo demodulator, and Sub-IF amplifier.

FM signals induced by an FM antenna are led to FM antenna coil L101 through antenna attenuator switch S004 and balun coil L005. The signals are then applied to an FET RF amplifier and the amplified output is applied to FET mixer H102 through a double-tuned circuit and converted into 10.7MHz IF signals. H103 is a local oscillator transistor. The undesired drain-to-gate interelectrode capacitance of RF amplifier H101 is neutralized by the secondary take up winding on L102 and capacitor C105 for maximum gain and good stability. The gate of H101 is returned to the AGC bus through R101 and a bypass capacitor C114. The AGC voltage is obtained by rectifing oscillation being produced by capacitors C117 and C118. Oscillator injection to the source of mixer FET H102 is accomplished by C113.

The converted IF signals are led to the IF amplifier consisting of four transistor amplifier stages and an IC limiter. The FM IF amplifier shars its third and fourth stage transistors H203 and H204 with the AM IF amplifier. The fully amplified IF signal is then applied to the FM discriminator transformer L204 and demodulated into audible signal.

The demodulated audio signal is applied to the base of the 19KHz pilot signal amplifier H209. This amplifier operates as an emitter follower for audio signals and has no voltage gain. The audio output is obtained from the emitter of H209 and applied to the center tap of 38KHz tuned transformer L211 through a 67KHz SCA trapping filter consisting of L212 and C249. The audio signal is split into right and left channel circuit by the diode-switching networks, then led to the crosstalk canceling amplifiers.

When the demodulated audio signal is stereo composite signal, the 19KHz pilot signal amplifier operates as a tuned amplifier for the 19KHz pilot signal and as an emitter follower for the composite signal except 19KHz. The pilot signal, amplified by H209, is applied to H210 for further amplification. Then it is rectified by the full wave rectifier consisting of diodes H213 and H214, thus 38KHz pulsating current to drive 38KHz sub-carrier amplifier transistor H212, and 38KHz subcarrier is provided. The 38KHz sub-carrier and stereo composite signal, except 19KHz, are superimposed at the secondary coil of L211 and the composite signal is alternatively sampled by the right and left channel switching diodes at the rate of 38KHz. The sampled or separated outputs are led to the crosstalk canceling amplifier consisting of H214 and H215.

Then led to tuner output pins J205 and J206 after canceling undesirable crosstalk.

Two trapping filters are employed to trap undesirable 19KHz pilot signal and 38KHz sub-carrier components in the output circuit of H214. A circuit consisting of L213 and C259 is tuned against 19KHz and the other of L215 and C265 is agajnst 38KHz.

The second 19KHz pilot signal amplifier H210 is so designed that the emitter circuit is electrically switched on and off by controling the bias current of switching transistor H211. The bias current of H211 is obtained from the Sub-IF amplifier circuit consisting of transistor H206, 10.7MHz IF transformer L208 and two diodes H221 and H222. The stereo switch on the front panel is connected across the base and emitter of switching transistor H211. Therefore, when the switch is in its normal "off" position, the base and emitter are short-circuited and no emitter current flows.

Thus the emitter of the second 19KHz pilot signal amplifier is cut off and no 19KHz signal appears at the collector of H210. No stereo separation is obtained. When the stereo switch is depressed, the emitter-base short-circuit is opend and if the level of a received FM signal is higher than the pre-determined level, the DC voltage developping across R001 and R234 drives the switching transistor H211 on. Thus H210 begins to operate. Under this circumstances, the presence of a 19KHz pilot signal turns on H212 and it turns on stereo beacon switching transistor H213 turning the beacon lamp on.

The direct current voltage developped between-B and diode H221 is used to drive FM tuning meter M001.

3.2.Suggestions for Trouble Shooting of FM Tuner

3.2.1.Symptom : No FM Reception

First, turn on the power switch and try to tune in to FM stations. Rotate the flywheel tuning knob slowly and observe the tuning meter. If the tuning meter deflects at several frequencies, the tuner circuit preceding the limiter circuit may have no failure.

Tune the set to a station and check the following points by using a high sensitivity oscilloscope : output of the FM discriminator test point B, the emitter of the 19KHz pilot signal amplifier H209, and Multiplex stereo output pin J205 or J206. When no reading is observed on the tuning meter, check the local oscillator circuit by using an RF VTVM. Normal local oscillation voltage is about 2 volts at the hot end of the tank circuit. If the oscillation voltage is normal, check all voltage distributions and compare them with those shown the schematic diagram.

3.3.2.Symptom : No Stereo Separation

First, check the stereo switch is depressed, connect an FM RF signal modulated by a stereo signal to the FM antenna terminals and check whether the stereo beacon lamp is turned on or not. When the lamp is not turned on, connect an oscilloscope to the collector of H212 and observe 38KHz stereo sub-carrier is correctly generated or not.

4 . FM AND AM TUNER ALIGNMENT

The following alignment requires many precision measuring equipments shown in P. No alignment should be performed in the field unless the service man has these equipments and enough knowledge in solid stage amplifier components, since all the units are factory aligned and not become misaligned by themselves.

4.1.AM Front End

1) Set an AM signal generator to 600KHz, 400Hz 30% modulation. Tune the receiver to the same frequency and adjust local oscillator coil L108 until the dial pointer coincides with the 600KHz marking on the dial.

2) Set the AM signal generator to 1400KHz. Tune the receiver to the same frequency and adjust trimming capacitor C129 until the dial pointer coincides with the 1400KHz marking on the dial.

3) Repeat procedure 1 and 2 until no further adjustment is necessary between 600KHz and 1400KHz.

4) Set the generator to 600KHz. Tune the receiver to the same frequency and adjust antenna coil L001 in a plastic case and RF coil L107 for maximum output.

5) Set the generator to 1400KHz. Tune the receiver to the same frequency and adjust each antenna trimming capacitor and RF trimming capacitor C121 and C126 for maximum output.

6) Repeat procedure 4 and 5 until no further improvement is obtained.

Note : During tracking alignment reduce the signal generator output as necessary to avoid AGC action.

4.2.AM IF Amplifier

To align the AM IF amplifier, a sweep generator with 455KHz marker generator combined is necessary.

1) Connect the sweep generator across the AM local oscillator section of the tuning capacitor and common ground. Connect an oscilloscope to test point C.

2) Turn each primary and secondary core of IF transformers L109, L205, and L206 for maximum and symmetrical response with the marker pip at the top.

4.3.FM Front End

4.3.1 Local Oscillator Adjustment

1) Measuring instruments connection.

Connect an FM signal generator to the FM antenna terminals on the rear panel. Connect a VTVM or an oscilloscope across the speker system terminals.

2) Set the FM signal generator to 90MHz, 400Hz 100% modulation. Tune the receiver to the same frequency and adjust local oscillator coil L106 until the dial pointer coincides with the 90MHz marking on the dial.

3) Set the FM signal generator to 106MHz. Tune the receiver to the same frequency and adjust trimming capacitor C119 until the dial pointer coincides with the 106MHz marking on the dial.

4) Repeat procedure 2 and 3 until no further adjustment is necessary between 90MHz and 106MHz.

4.3.2.FM Tracking Alignment

1) Set an FM signal generator to provide about 5uV at 90MHz. Tune the receiver to the same frequency and turn each core of L101,L102 and L103 for maximum output.

2) Set the FM signal generator to 106MHz. Tune the receiver to the same frequency and adjust trimming capacitors C102, C107 and C111 for maximum output.

3) Repeat procedure 1 and 2 until no further improvement is obtained.

4.4.FM IF Amplifier

To align the FM IF amplifier, a high frequency sweep generator with 10.7MHz marker generator combined is required. Connect the sweep generator to the FM local oscillator section of the tuning capacitor and an oscilloscope to test point A. Turn each primary and secondary core of IF transformers L104,L201,L202 and L203 for maximum and symmetrical response with the marker pip at the top.

4.5.FM Discriminator

Connect an oscilloscope to test point B and turn the primary and the secondary cores of discriminator transformer L204 for straight and symmetrical "S" curve with 10.7MHz marker pip at the center.

More precision adjustment of discriminator requires a distortion meter. To make this precision adjustment, connect an FM signal generator having low distortion characteristics to the antenna terminals of the set. Tune the set to the FM signal and measure the distortion of audio output. Turn the primary core of the discriminator transformer so as to obtain minimum distortion.

4.6.FM Sub-IF Amplifier

To align the sub-IF amplifier, tune the receiver to an FM singal and turn the core of L208 so that the FM tuning meter reads maximum deflection.

4.7.FM Stereo Demodulator

A stereo multiplex and RF FM signal generator is required to make the separation adjustment on this circuit.

Perfom the following adjustment in sequence.

1) Set the FM signal generator to 98MHz, 2mV output level. Tune the receiver to the same frequency. Ensure that the stereo switch is depressed for stereo operation.

2) Connect an oscilloscope probe to the collector of H212 and turn each core of L209, L210 and L211 for maximum 38KHz sub-carrier wave on the scope.

3) Turn the core of L211 again to obtain equal stereo separation in both of the right and the left channels.

4) Adjust trimming resistor R269 for maximum and equal stereo separation in both channels.

5 . PHONO AMPLIFIER

A phono signal applied to the phono jack, is led to the phono amplifier for the RIAA equalization and pre amplification. The phono amplifier makes use of a conventional bipolar transistor H301 and a field-effect transistor H303. The collector of H301 is direct coupled to the gate of H303 and the base bias for H301 is derived from the source circuit of H303. This configuration assures a good thermal and electrical stability. R309, R311, R307, C304 and C306 condition the feedback characteristic from the drain of H303 to the emitter of H301 for precise RIAA equalization. The RIAA equalized and amplified phono signal is led to selector switch S003-1 and S003-3.

6 . TONE AMPLIFIER

A signal from the selector switch is led through stereo switches S001-2, tape monitor switch S001-1, balance control R005 and volume control potentiometer R006 to the input pin of the tone amplifier. The tone amplifier makes use of four transistors H401, H403, H405 and H407 in a conventional negative feedback type configuration.

The tone control unit consisting of two potentiometers R941 and R942, resistors R943 and R945, and capacitors C941 and C943 is mounted on a separate PC board P940.

A bootstrap configuration is utilized with H401 to provide high input impedance. The output signal of the tone control amplifier is led to the power amplifier through low filter unit mounted on a part of PC board P800.

7. POWER AMPLIFIER

7.1. Circuit Description

7.1.1. Amplifier

The signal from the tone amplifier is applied to the inverting input (pin #2) of operational amplifier H501 through the input coupling network R553, R503, R501 and C501. This network provides a high input impedance to the amplifier and prevents any dc from appearing at the op amp input.

The output of the op amp is divided by networks C511/R521 and C509/R523, and is applied to the base of H507 and H509. H507 and H509 provide the voltage amplification necessary to drive driver (buffer) transistors H511 and H513. H511 and H513 are operated in a complimentary-symmetry configuration with their respective power transistors H002 and H004.

The output of H511 is applied to the base of H002, and that of H513 to H004. The combined operation of PNP transistors H002 and NPN transistors H004 provide a push-pull output appearing at output pin J505. This output is applied to network R609.

L003, and via headphones jack J012 contacts to the LOUDSPEAKER output terminals (J002).

To maintain good overall stability and linearity, negative feedback is utilized throughout the amplifier. This feedback is also necessary to reduce distortion to be well under the specified limits. R507, C503 and R505 condition the feedback signal for application to the non-inverting input (pin #3) of the op amp.

Except for the input, the amplifier uses direct coupling throughout. Potentiometer R509 placed across pin ♯1 and pin ♯5 of op amp H501 is for the DC balance control of the amplifier.

7.1.2. Dynamic Bias

Dynamic bias is applied to the bases of driver transistors H511 and H513. H511 and H513, in turn, determine the class of operation for the power amplifier transistors H002 and H004, thus maintaining a constant class of operation by establishing and maintaining the proper collector-to-emitter current. This dynamic bias circuit consists of adjusting resistor R551, and temperature sensitive diodes H701 and H703. The circuit provides a variable base bias for driver transistors H511 and H513 that automatically maintains the proper base voltage (bias condition) with temperature change.

Temperature sensitive biasing components of the dynamic bias circuit are thermally coupled through a heatsink to the PA transistors.

7.1.3. Amplifier Protection

Protection for the amplifier is provided by sensing-resistors R547 and R549 operating in conjunction with H503 and H505. When the output power transistors H002 and H004 are over-driven, the current through the output power transistors increase and it causes an increases in the current flow through R547 and R549. The resulting voltage drop across R547 and R549 controls the biasing of H503 and H505, resulting in clipping of any input signal of greater amplitude than the level required for predetermined power output. In the case of output short-circuit. H503 and H505 work to decrease the bias currents of H507 and H509 respectively. It results in decrease in the bias currents of H511, H002, H513 and H004. Thus a good protection is achieved for both polarities.

7.2.DC Balance And Bias Adjustment of The Main Amplifier

Connect a VTVM and a dummy load of 8ohms 50W across the speaker system output terminals for the channel being tested. Set the voltage range on VTVM to the lowest scale available, preferably 100 or 300 mV full scale deflection. First turn Bias control resistor R551 and R552 fully clockwise. Adjust DC balance control R509 until no DC voltage is obtained at the speaker terminal strip. Repeat the procedure for the other channel.

Nextproceed to the Bias adjustment.
Connect the VTVM across resistor R547 or R549 and adjust bias control resistor R551 until the VTVM reads 7mV. Connecting an oscilloscope across the speaker system output terminals and an audio oscillator (1000Hz) to the AUXjack on the rear panel, ensure that no crossover distortion is observed on the scope with faint signal input from the audio oscillator. To adjust the other channel bias current, connect the VTVM across resistor R550 or R548 and adjust bias control resistor R552 for the same voltage reading.

7.3.Suggestions for Trouble Shooting of Power Amplifier

7.3.1.Excessive line consumption

1) Check for shorted rectifiers H001: also check C002, C003, C004 and C005.

2) Check for shorted transistors H511, H513, H002 and H004. Check for open control R551, and bias diode H701 and H703. Check L002 for short.

CAUTION : Because the driver and output stages are direct coupled, components may fail as a direct result of an initial component failure. If a shorted transistor, Zener diode, control, or bias diode is found, be sure to check the remaining driver and output components for short or open circuits before re-energizing the amplifier.

7.3.2.No line consumption or zero bias.

1) Check line cord, over current circuit breaker, transistors H002 and H004, bias diodes H701 and H703.

2) Check for open rectifies H001, or open L002.

7.3.3.High dc voltage at loudspeaker terminals at all times.

1) Check H002 and H004 for shorts.

2) Check for defective potentiometer R509.

7.3.4.No DC Balance.

1) Check op amp and Zener diodes H515 and H517.

2) Check R509.

8 . REGULATED POWER SUPPLY

8.1.Circuit Description

The power supply unit mounted on P600 provides three different DC outputs of +25V, −11V and −2V. The +25V output is well regulated by a conventional series control type transistor regulator consisting of two transistors, H601 and H602, and a zener diode H603. This source energizes the tone amplifier and the phono amplifier.

The −11V output is regulated by a zener diode H229 mounted on P200 and this source energizes the AM and FM tuner section mounted on P100 and P200. The −2 output is used only for the stereo beacon lamp operation. +29V and −29V power source for the main amplifier is obtained by bridge connected rectifiers H001 and filtering capacitors C002 and C003. This part is not mounted on a PC board but on the chassis.

8.2.Suggestions for Trouble Shooting of Regulated Power Supply

8.2.1.Symptom : No output

Check for

1) Open transistor H602.

2) Shorted capacitiors C603, C611, C610 and C604.

3) Open power transformer L002.

4) Open resistors R605, R606 and R604.

8.2.2.Symptom : Excessive output voltage

Check for

1) Shorted transistor H602.

2) Shorted resistor R602.

3) Open resistor R601.

4) Open zener diode H603.

8.2.3.Sympton : Inadequate output voltage

Check for

1) Open or low value capacitors C604.

2) Shorted capacitor C602.
3) Open resistor R602 and R603.
4) Shorted zener diode H603.

8.2.4. Excessive ripple

Check for open or low value capacitors C604, C610, C611 and C602.

8.3. Adjustment of Regulated Power Supply

Connect a DC voltmeter across +25V output pin J606 and the common ground. Adjust trimming resistor R602 for 25V reading on the meter.

9. TEST EQUIPMENTS FOR SEVICING

Item	Manufacturer and Model No.	Use
AM Signal Generator		Signal Source for AM Alignment
Test Loop		Used with AM Signal Generator
FM Signal Generator	Distortion 0.3% or less	Signal source for FM Alignment
Audio Oscillator	Residual distortion 0.02% or less	Sine wave source for modulating AM or FM Signal Generator, or trouble shooting
Stereo Modulator	Distortion 0.3% or less	Modulating FM Signal Generator for Separation Alignment and trouble shooting
Oscilloscope	High Sensitivity	Wave form analysis and trouble shooting
VTVM	With RF probe	Trouble shooting
Circuit Tester		Trouble shooting
Sweep Generator	For 455KHz and 10.7MHz	AM and FM IF alignment
8-ohm Resistors	0.5%50W (non-inductive)	Dummy Load
Line Voltmeter	0-150V AC	Line voltage monitor
Variable Autotransformer	0-140V, 10A	Primary power voltage adjuster

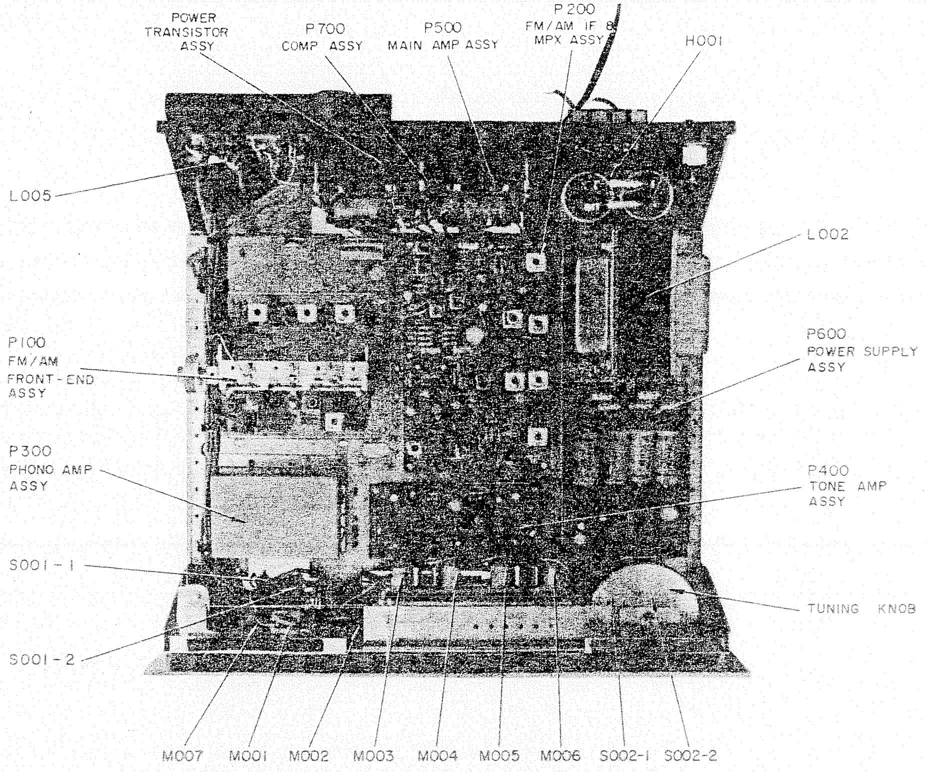

POWER TRANSISTOR ASSY
P700 COMP ASSY
P500 MAIN AMP ASSY
P200 FM/AM IF & MPX ASSY
H001
L005
L002
P100 FM/AM FRONT-END ASSY
P600 POWER SUPPLY ASSY
P300 PHONO AMP ASSY
P400 TONE AMP ASSY
S001-1
TUNING KNOB
S001-2
M007
M001
M002
M003
M004
M005
M006
S002-1
S002-2

Figure 1 Main Chassis Adjustment and Component Locations

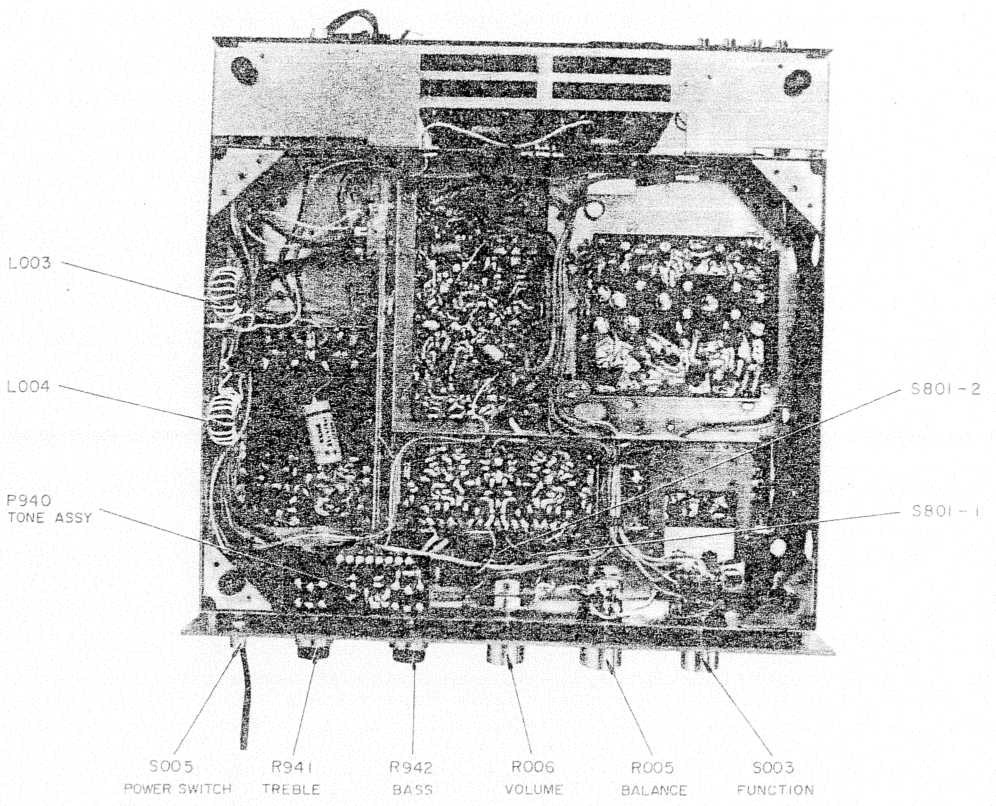

L003
L004
S801-2
P940 TONE ASSY
S801-1
S005 POWER SWITCH
R941 TREBLE
R942 BASS
R006 VOLUME
R005 BALANCE
S003 FUNCTION

Figure 2 Main Chassis Adjustment and Component Locations

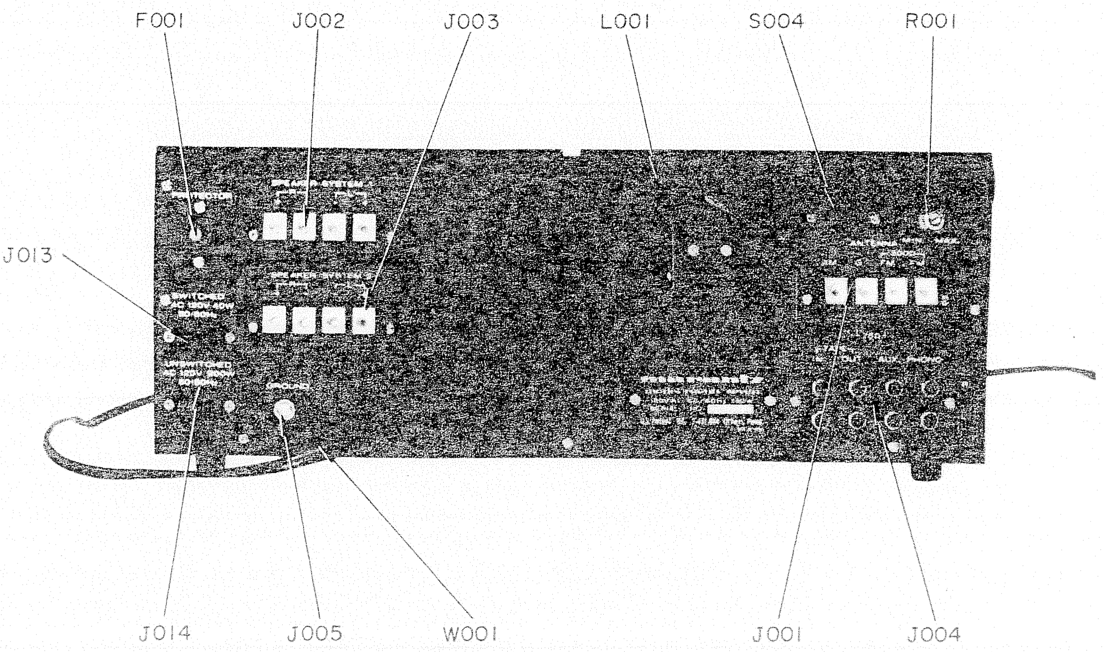

F001
J002
J003
L001
S004
R001
J013
J014
J005
W001
J001
J004

Figure 3 Rear Panel Adjustment and Component Locations

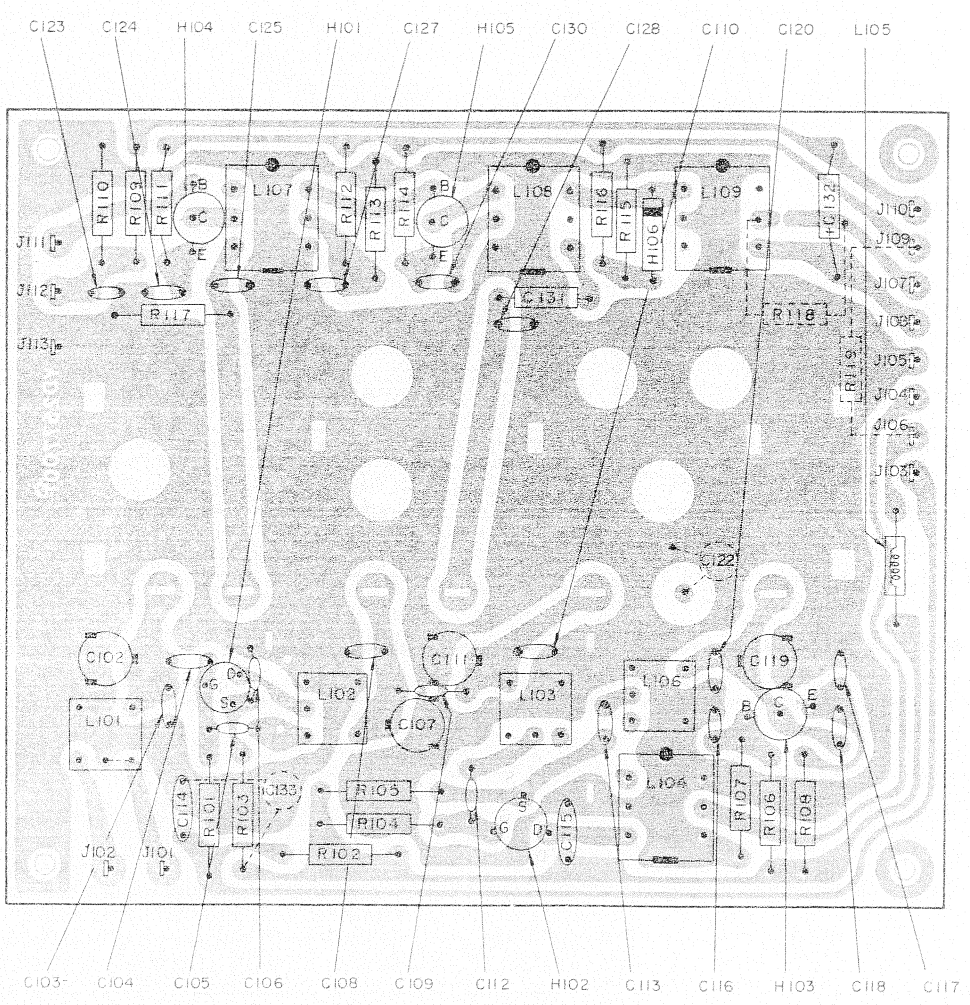

C123
C124
H104
C125
H101
C127
H105
C130
C128
C110
C120
L105
R110
R109
R111
B
C
E
L107
R112
R113
R114
L108
R116
R115
H106
L109
C132
J110
J109
J107
J108
J105
J104
J106
J103
J111
J112
J113
R117
C131
R118
R119
C122
C102
L101
G
D
S
L102
C111
C107
L103
L106
C119
L104
C114
R101
R103
C133
R105
R104
R102
C115
R107
R106
R108
J102
J101
C103
C104
C105
C106
C108
C109
C112
H102
C113
C116
H103
C118
C117

Figure 4 AM/FM Front End Circuit

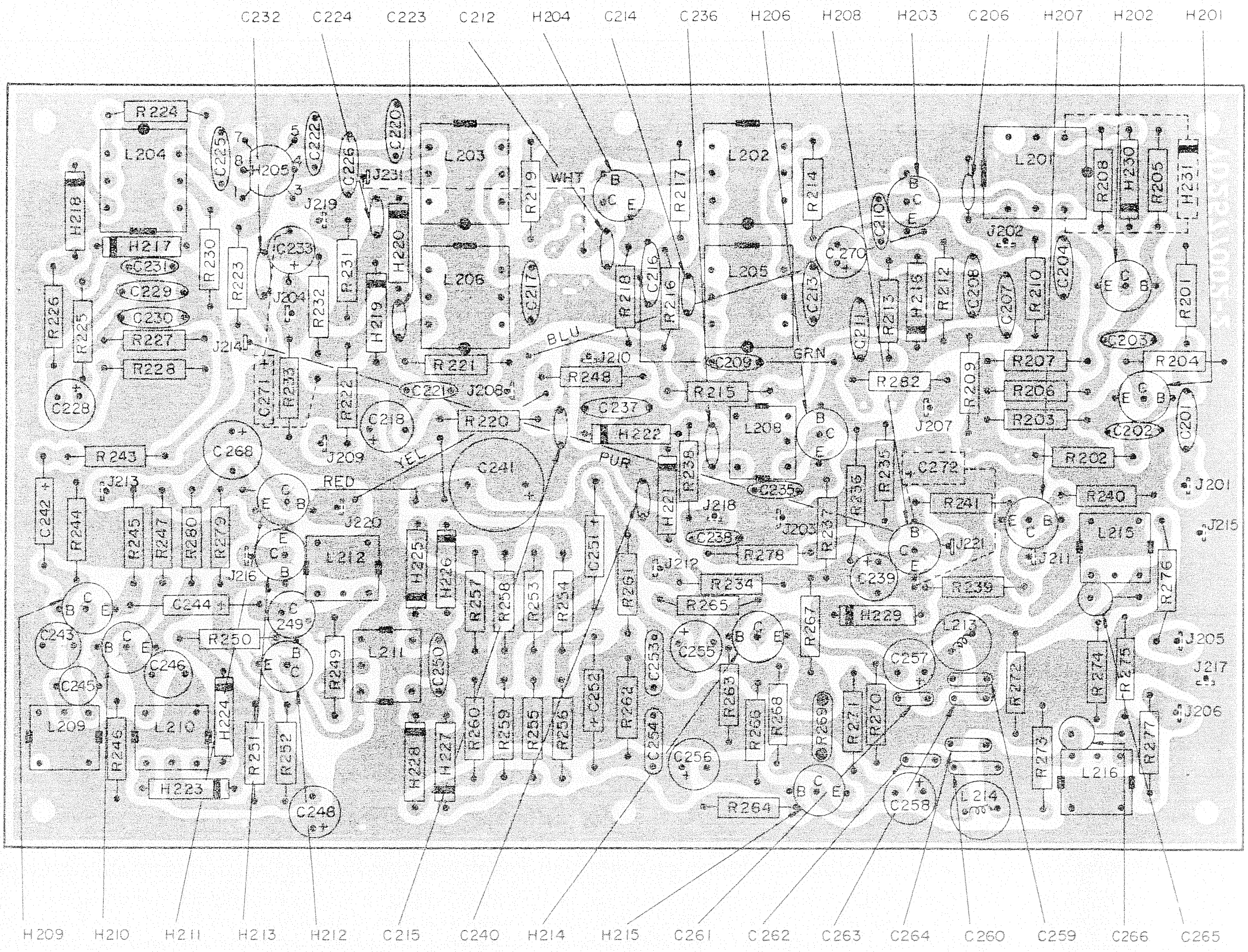

C232
C224
C223
C212
H204
C214
C236
H206
H208
H203
C206
H207
H202
H201
H209
H210
H211
H213
H212
C215
C240
H214
H215
C261
C262
C263
C264
C260
C259
C266
C265

Figure 5 AM/FM/IF Amplifier and FM MPX Unit

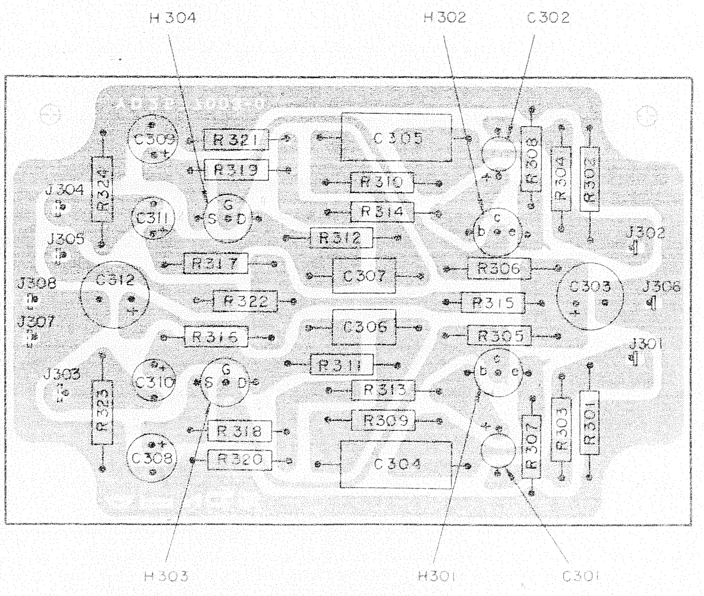

H304
H302
C302
H303
H301
C301

Figure 6 Equalizing Amplifier

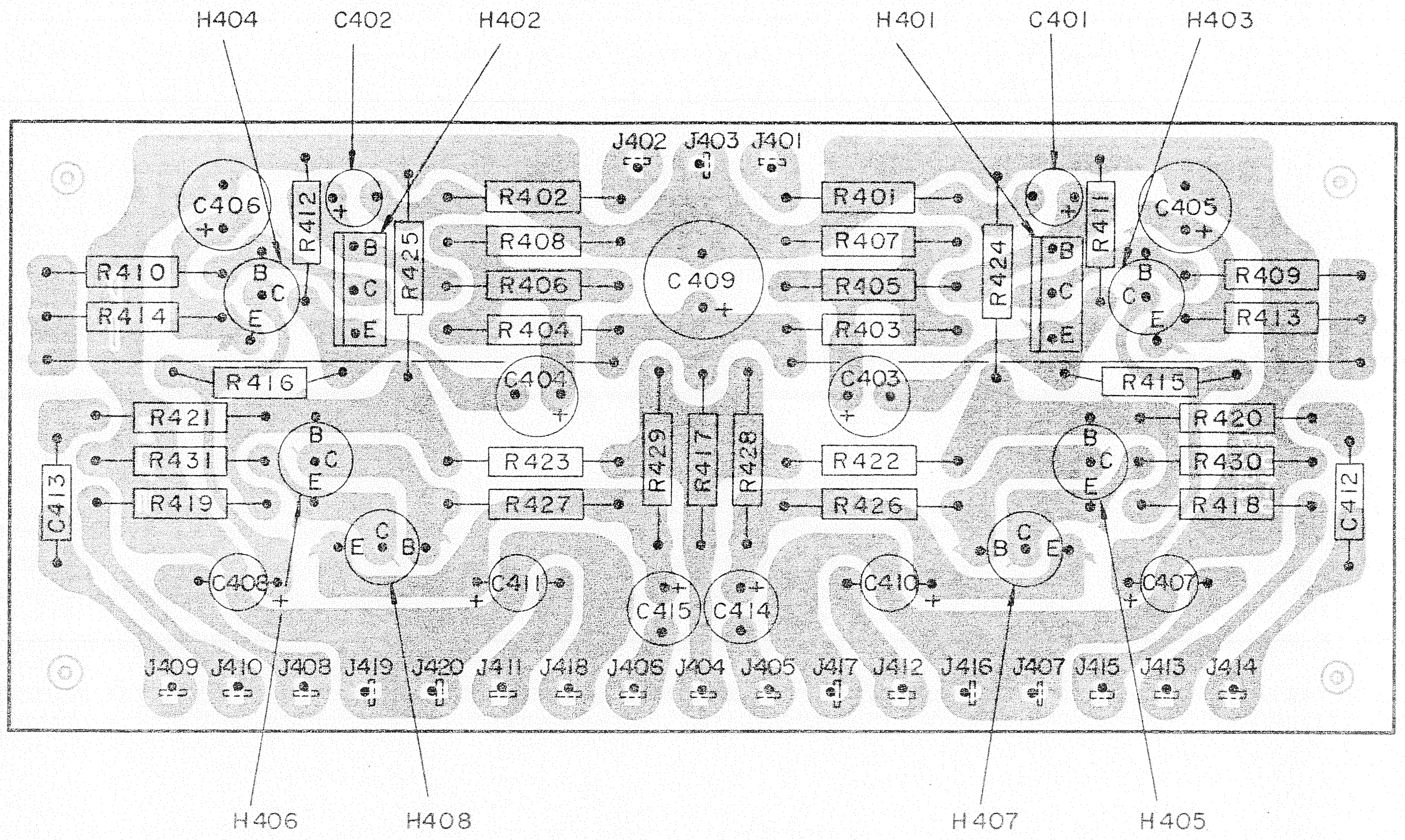

H404
C402
H402
H401
C401
H403
J402
J403
J401
C406
R412
R402
R401
R411
C405
R425
R408
R407
R424
R410
B
C
E
R406
C409
R405
R409
R414
R404
R403
R413
R416
C404
C403
R415
R421
R420
R431
R423
R429
R417
R428
R422
R430
R419
R427
R426
R418
C413
C412
C408
C411
C415
C414
C410
C407
J409
J410
J408
J419
J420
J411
J418
J406
J404
J405
J417
J412
J416
J407
J415
J413
J414
H406
H408
H407
H405

Figure 7 Pre-Amplifier

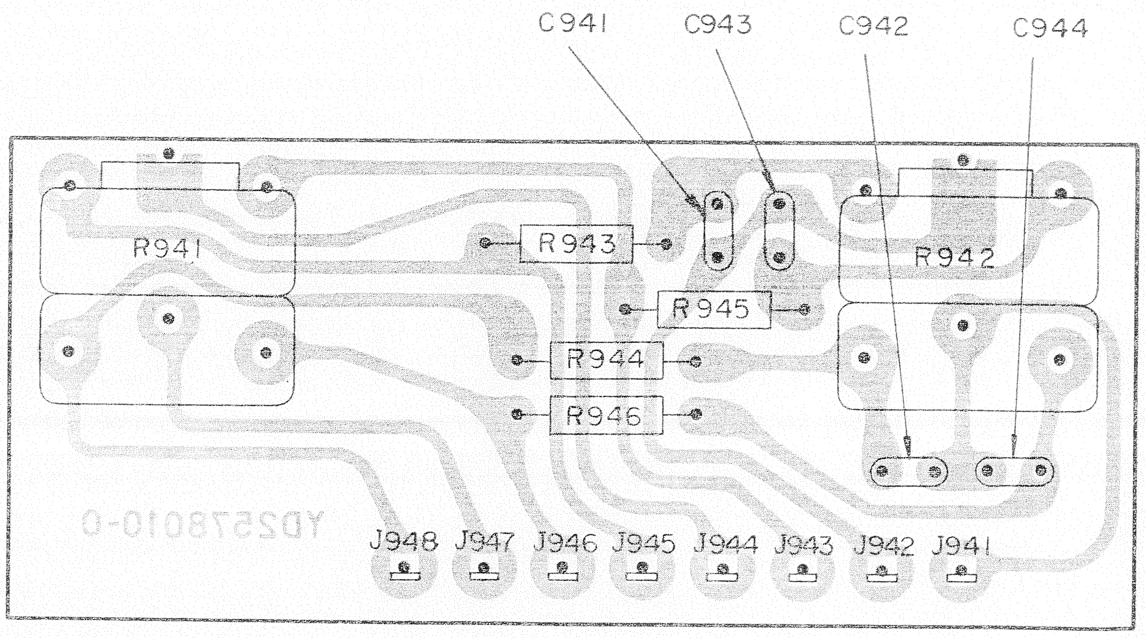

C941
C943
C942
C944
R941
R943
R942
R945
R944
R946
J948
J947
J946
J945
J944
J943
J942
J941

Figure 8 Tone Control Unit

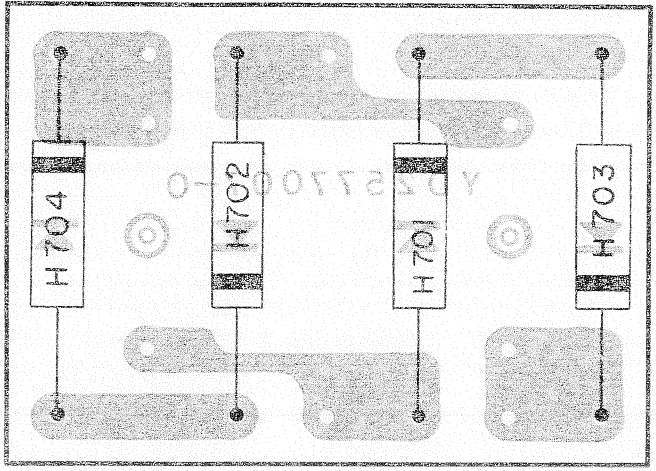

H704
H702
H701
H703

Figure 9 Temperature Sensitive Diode Unit

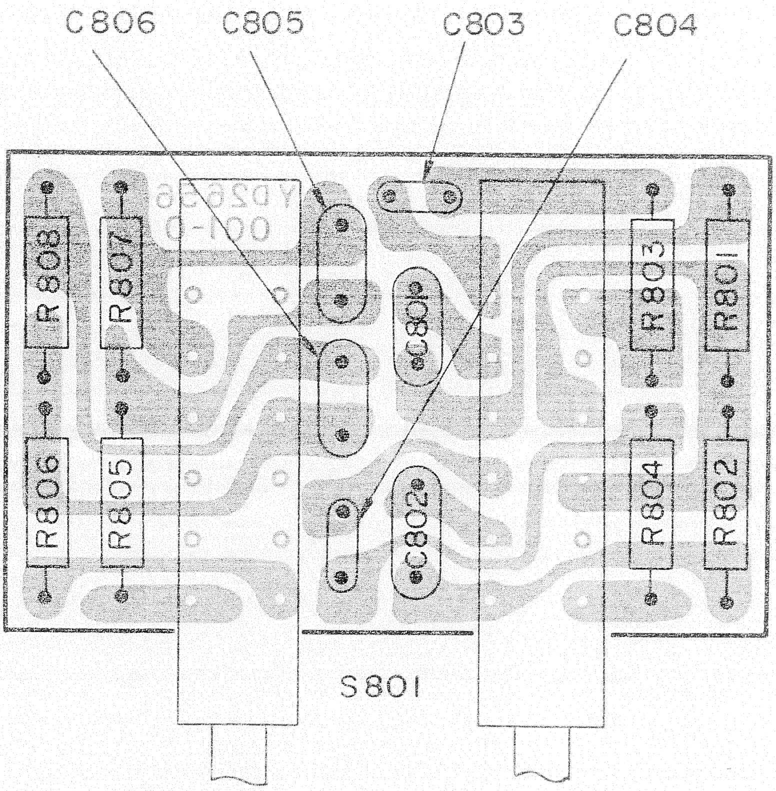

C806
C805
C803
C804
R808
R807
R806
R805
C801
C802
R803
R801
R804
R802
S801

Figure 10 Loudness and Low Filter Unit

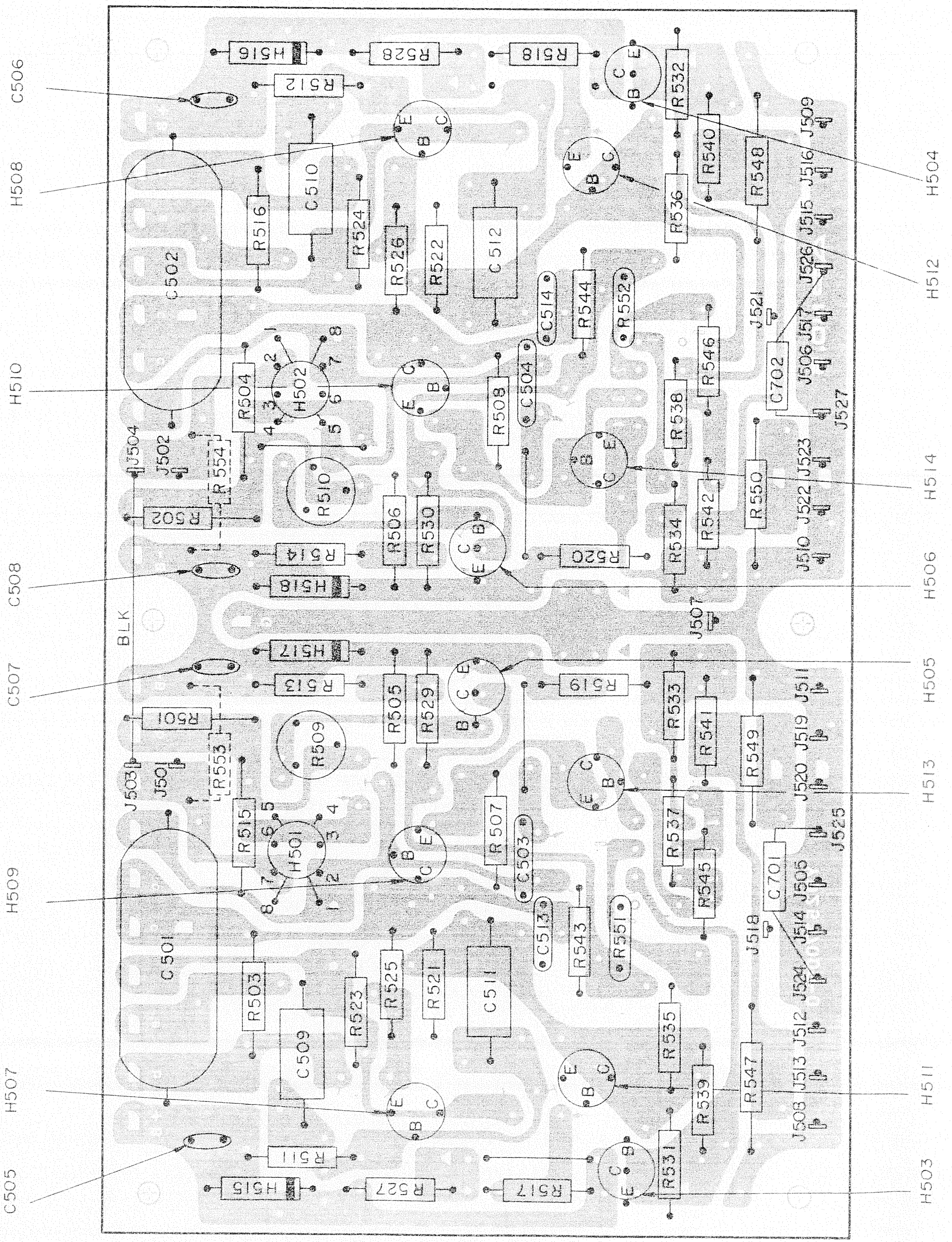

C506
H508
H510
C508
BLK
C507
H509
H507
C505
H504
H512
H514
H506
H505
H513
H511
H503
H516
R528
R518
R512
C510
R516
R524
R526
R522
C512
C502
R532
R540
R548
R536
C514
R544
R552
R546
J521
C702
R504
H502
C504
R508
R538
R550
R534
R542
R520
R514
H518
R510
R506
R530
R502
R554
J502
J504
J503
J501
R553
R501
R513
H517
R505
R529
R509
R519
R533
R541
R549
R515
H501
R507
C503
R537
R545
C701
C513
R543
R551
R551
J518
C501
R503
C509
R523
R525
R521
C511
R535
R539
R547
R511
R515
R527
R517
R531
J509
J516
J515
J526
J517
J506
J527
J523
J522
J510
J507
J511
J519
J520
J525
J505
J514
J524
J512
J513
J508
E
B
C
1
2
3
4
5
6
7
8

Figure 11 Main Amplifier

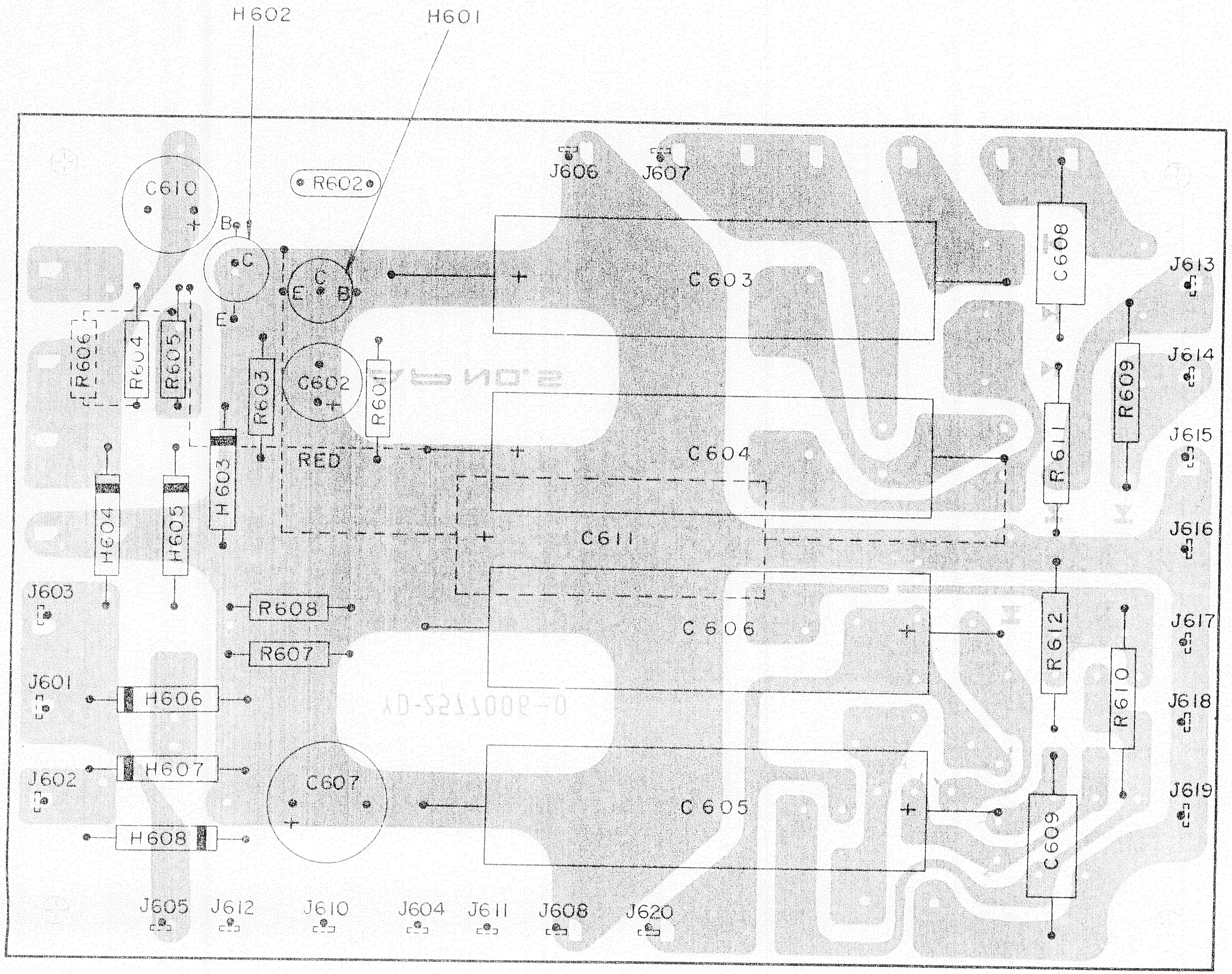

H602
H601
C610
R602
B
C
E
C
E
B
J606
J607
C603
C608
J613
R606
R604
R605
R603
C602
R601
R609
J614
C604
R611
J615
RED
H604
H605
H603
C611
J616
J603
R608
R607
C606
R612
J617
R610
J601
H606
J618
J602
H607
C607
C605
C609
J619
H608
J605
J612
J610
J604
J611
J608
J620

Figure 12 Power Supply Unit

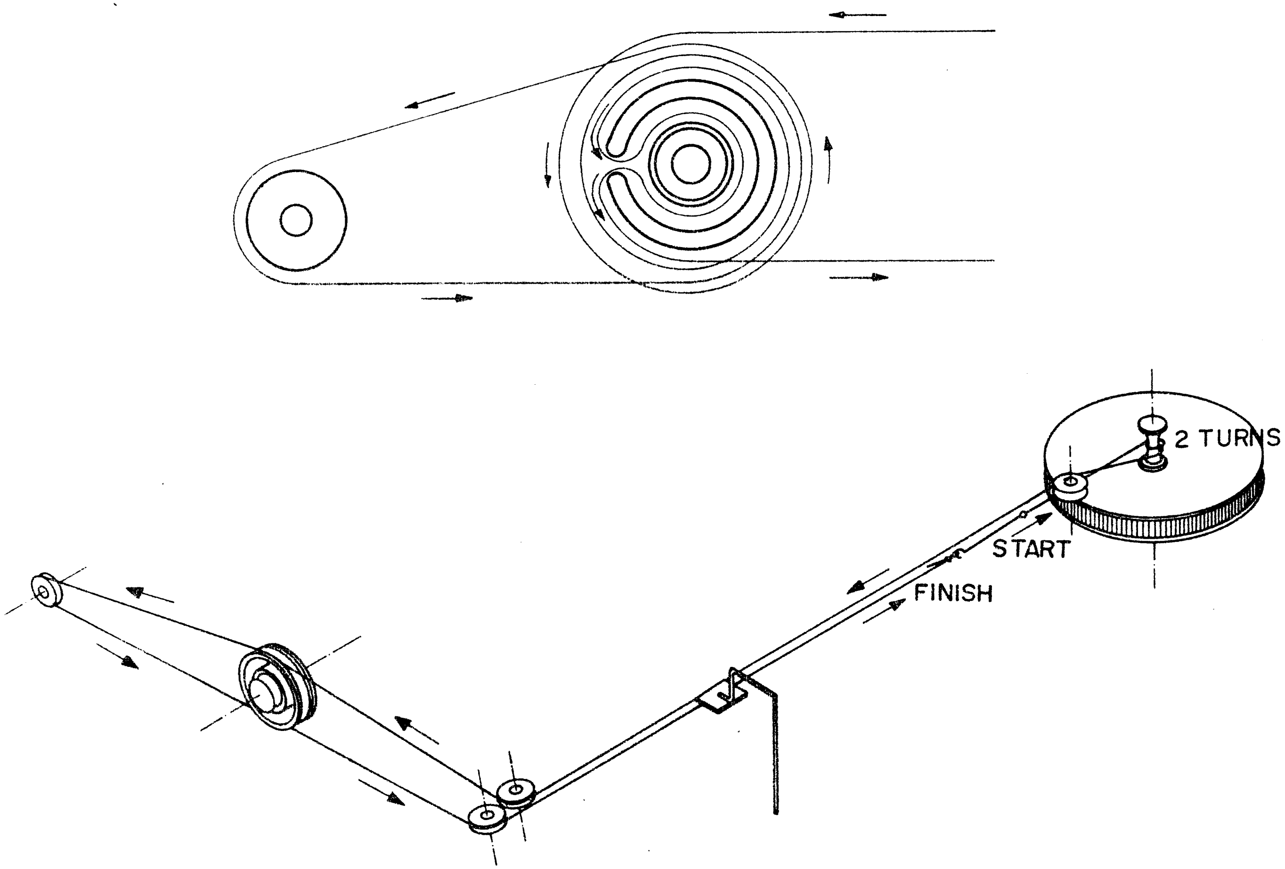
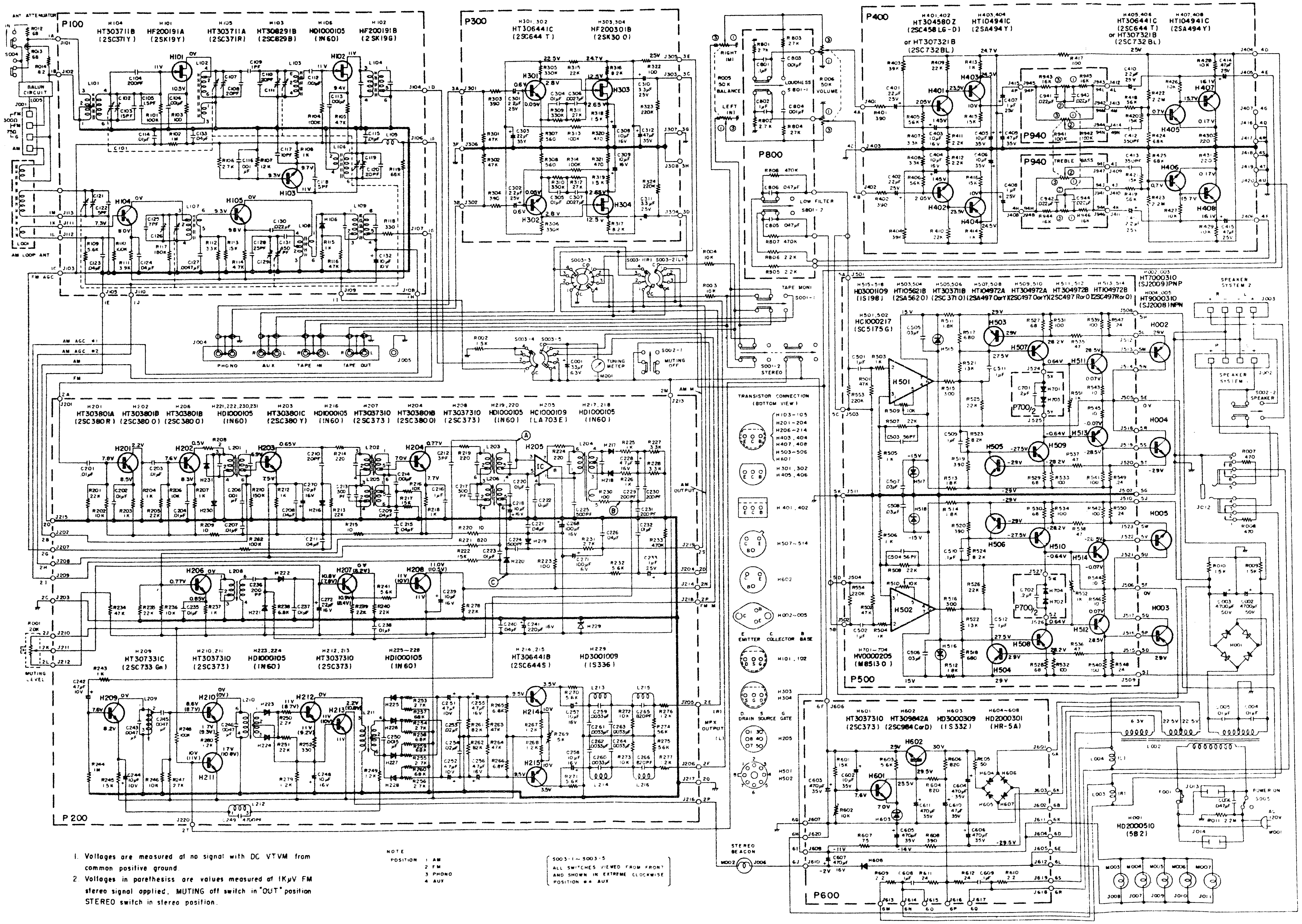

2 TURNS
START
FINISH

Figure 13 Dial Stringing Diagram


ANT ATTENUATOR
BALUN CIRCUIT
AM LOOP ANT
FM AGC
P100
H104 HT303711B (2SC371Y)
H101 HF200191A (2SK19Y)
H105 HT303711A (2SC371R)
H103 HT308291B (2SC829B)
H106 HD1000105 (IN60)
H102 HF200191B (2SK19G)
P300
H301,302 HT306441C (2SC644 T)
H303,304 HF200301B (2SK30 O)
P800
RIGHT (R)
LEFT (L)
BALANCE
LOUDNESS
VOLUME
LOW FILTER
TAPE MONI
P400
H401,402 HT304580Z (2SC458 LG-D) or HT307321B (2SC732BL)
H403,404 HT104941C (2SA494Y)
H405,406 HT306441C (2SC644 T) or HT307321B (2SC732BL)
H407,408 HT104941C (2SA494Y)
P940
TREBLE
BASS
PHONO
AUX
TAPE IN
TAPE OUT
TUNING METER
MUTING
STEREO
AM AGC #1
AM AGC #2
AM
FM
P200
H201 HT303801A (2SC380R)
H202 HT303801B (2SC380 O)
H206 HT303801B (2SC380 O)
H221,222,230,231 HD1000105 (IN60)
H203 HT303801C (2SC380 Y)
H216 HD1000105 (IN60)
H207 HT303731O (2SC373)
H204 HT303801B (2SC380 O)
H208 HT303731O (2SC373)
H219,220 HD1000105 (IN60)
H205 HC1000109 (LA703E)
H217,218 HD1000105 (IN60)
AM OUTPUT
MUTING LEVEL
H209 HT307331C (2SC733 Gn)
H210,211 HT303731O (2SC373)
H223,224 HD1000105 (IN60)
H212,213 HT303731O (2SC373)
H225~228 HD1000105 (IN60)
H214,215 HT306441B (2SC644S)
H229 HD3001009 (1S336)
MPX OUTPUT
TRANSISTOR CONNECTION (BOTTOM VIEW)
EMITTER COLLECTOR BASE
DRAIN SOURCE GATE
STEREO BEACON
P500
H515~518 HD3001109 (1S198)
H503,504 HT105621B (2SA562O)
H505,506 HT303711B (2SC371O)
H507,508 HT104972A (2SA497 O or Y)
H509,510 HT304972A (2SC497 O or Y)
H511,512 HT304972B (2SC497 R or O)
H513,514 HT104972B (2SA497 R or O)
H501,502 HC1000217 (SC5175G)
H701~704 HV0000205 (MB513O)
H002,003 HT7000310 (SJ2009)PNP
H004,005 HT9000310 (SJ2008)NPN
SPEAKER SYSTEM 2
SPEAKER SYSTEM 1
P600
H601 HT303731O (2SC373)
H602 HT309842A (2SC984 C or D)
H603 HD3000309 (1S332)
H604~608 HD2000301 (HR-5A)
H001 HD2000510 (5B2)
POWER ON
AC 120V
P700

1. Voltages are measured at no signal with DC VTVM from common positive ground.
2. Voltages in parethesiss are values measured at 1KμV FM stereo signal applied, MUTING off switch in "OUT" position STEREO switch in stereo position.

NOTE
POSITION 1 AM
2 FM
3 PHONO
4 AUX

S003-1 ~ S003-5
ALL SWITCHES VIEWED FROM FRONT AND SHOWN IN EXTREME CLOCKWISE POSITION #4 AUX

Figure 14 Schematic Diagram

PARTS LIST

REF. DESIG.	MARANTZ PART NO.	DESCRIPTION
A001	2565063010	Escutcheon
A002	2565257012	Lid
A003	2656265010	Indicator
A004	2578103012	Pointer
A005	2656160010	Bracket
A008	2577063022	Escutcheon
A009	2477273010	Fly Wheel
A010	2577063032	Escutcheon
A012	2578067010	Cap
-A014		
A017	2578067020	Cap
A018	2578067020	Cap
A021	2578067030	Cap
A022	2578067030	Cap
A026	2577067022	Cap
-A032		
A501	2580401012	Frame
A502	2556302012	Dial
A503	2656107012	Sheet
A504	2577053012	MPX Lamp Cover
A506	2578154010	Knob
-A508		
A511	2578154020	Knob
A512	2578154020	Knob
A514	2578154030	Knob
A515	2578154030	Knob
A521	2577154020	Knob
-A527		
B533	2578120010	Head Phones Insulator
B001	2656257020	Bottom Lid
B002	2656105012	Sub Chassis
B003	2580105503	Main Chassis (K)
B004	2580105013	Main Chassis (K)
B005	2578160012	Bracket for Main Chassis (K)
B006	2578160012	Bracket for Main Chassis (K)
B007	2578160020	Bracket for Main Chassis (K)
-B010		
B013	2656160500	Front Bracket (K)
B014	2656160020	Front Bracket
B015	2578101010	Support for Front Bracket
B016	2578160522	Support for Front Bracket
B020	2578160522	Bracket (K) for AM Antenna
B021	2578160052	Bracket (K) for AM Antenna
B023	2578160062	Bracket (K) for AM Antenna
B024	5502030410	S. H. Rivet for AM Antenna
B025	5502030410	S. H. Rivet for AM Antenna
B026	2580109010	Shield
B027	2656160030	Bracket for P. C. Board
B028	2656160030	Bracket for P. C. Board
B031	2580160512	Bracket (K) for Pulley
B032	2580160042	Bracket (K) for Pulley
B033	2577112020	Shaft for Pulley
B034	2577112020	Shaft for Pulley
B035	2578109060	Shield for Tone Volume
B041	2578160540	Bracket (K) for Pulley Spring
B042	2578160080	Bracket, for Pulley Spring
B043	2597160040	Bracket for Pulley Spring
B044	2597112010	Shaft for Pulley Spring
B045	1336112010	Shaft for Pulley Spring
B048	2580051500	Guide (K) for Pointer
B049	2580051010	Guide for Pointer
B050	2548112010	Shaft for Pointer
B053	2578106500	Bearing (K) for Flywheel
B054	2578104010	Retainer for Flywheel
B055	2577106010	Bearing for Flyweel
B057	2580053010	Cover for Lamp
B059	2578112022	Shaft for Flywheel
B061	53228059E0	Muting Level Nut
B062	5401215910	Muting Level Washer
B064	2578101040	Support for Escutcheon
-B067		
B071	2578055010	Collar for Head Phones
-B073		
B082	2656109010	Shield
B089	7140014900	Spring for Knob
B090	7140014900	Spring for Knob
B098	2506271010	Holder for Condencer
B099	2506271010	Holder for Condencer
B102	2656160040	Bracket for Meter
B013	2577005010	Coil+Chassise (K) Clemper
B104	2577005010	Coil+Chassise (K) Clamper
B110	1202258010	Hook for Dial Tuning
B111	71101239M0	Spring for Dial Tuning
B113	71400219Q0	Spring for MPX Stereo Lamp
B114	71400229L0	Spring for MPX Stereo Lamp
B115	2578259020	Bush for MPX Lamp
B121	2577160170	Bracket
B123	2656267010	Heat-Sink
B124	2577160140	Bracket
B125	2577160150	Bracket
B126	2656101010	Support for Heat-Sink
-B128		
B141	1382005030	Clamper for Lead
-B155		
B501	2506057010	Leg
-B504		
B507	2577262010	Pulley
-B511		
B514	2577106020	Bearing for Flywheel
B515	1415118010	Spacer for Flywheel
B518	1455259010	Bush AC CORD
B519	1455259010	Bush ANT CORD
B522	72081604A0	String
B524	2577118050	Spacer for light leakage
B526	1493259020	Bush for Lamp
B533	2577118030	Spacer for Lid
-B535		
B543	2656159010	Drum
B545	2656053020	Cover for damage proof
B548	2579120010	Insulator for Head Phones
B552	59114289C0	Washer for Coil
B553	59114289C0	Washer for Coil
B554	59110339H0	Washer for Coil
B555	59110339H0	Washer for Coil
B557	2577118020	Spacer for Heat-Sink
-B560		
D562	2577118030	Spacer for Lid
-D565		
D567	2578056010	Buffer for Meter
D568	2578056010	Buffer for Meter
D001	51570306B0	P. Tapt Screw
-D034		
D041	51570306B0	P. Tapt Screw
D046		
D047		
-D048	51570308B0	P. Tpat Screw
D049	51570306B0	P·Tapt Screw
-D059		
D061	51570306B0	P·Tapt Screw
D075		
D081	51570306B0	P. Tapt Screw
D094		
D096	51570308B0	P. Tapt Screw
-D101		

REF. DESIG.	MARANTZ PART NO.	DESCRIPTION
D106 -D108	51570312B0	P. Tapt Screw
D121 -D124	51060304H9	P. H. M. Screw
D126 -D127	51060304E0	P. H. M. Screw
D130 -D134	51060305E9	P. H. M. Screw
D136 -D144	51060305E9	P. H. M. Screw
D147 -D148	51060305E9	P. H. M. Screw
D150 -D152	51060305E9	P. H. M. Screw
D154	51060305E9	P. H. M. Screw
D161 -D162	51060308E9	P. H. M. Screw
D164 -D168	51060306E9	P. H. M. Screw
D172 -D173	51060320E9	P. H. M. Screw
D176 -D183	51060314E9	P. H. M. Screw
D185 -D186	51062608E0	P. H. M. Screw
D188 -D195	51060306E9	P. H. M. Screw
D201 -D204	51100406S9	B. H. M. Screw
D211 -D214	51060408E9	P. H. M. Screw
D216 -D219	51060412E9	P. H. M. Screw
D221 -D222	51060420E9	P. H. M. Screw
D226 -D229	51122608E0	T. H. M. Screw
D241 -D250	51140305E9	O. C. H. M. Screw
D256 -D257	51650304D9	Set Screw H. P.
D261	51640412D9	Set Screw C. P.
D264 -D267	51042608E0	F. H. M. Screw
D281 -D284	64002400R0	RG Ring E
D291 -D294	54020401S0	Flat Washer P
D296 -D307	54020401E0	Flat Washer P
D310	54020601E0	Flat Washer P
D312	56382040G0	Eyelet
D314	62041760W0	Lug
D321 -D332	54040402N0	Spring Washer
D337	54040402N0	Spring Washer
D338	54040602N0	Spring Washer
D341 -D343	54040302N0	Spring Washer
D346 -D355	54040302N0	Spring Washer
D361 -D363	53110403E9	Hexagon Nut
D364 -D369	53112603E0	Hexagon Nut

REF. DESIG.	MARANTZ PART NO.	DESCRIPTION
D370	53110403E9	Hexagon Nut
D371	53110603E0	Hexagon Nut
D373 -D374	53110303E9	Hexagon Nut
D376	53110303E9	Hexagon Nut
D377	54050300R0	T. L. Washer OR
D378	62031340W0	Lug
D381 -D385	54050300R0	T. L. Washer OR
D386	54050400R0	T. L. Washer OR
D387 -D388	54050300R0	T. L. Washer OR
D389 -D394	54052600R0	T. L. Washer OR
P100	YD25770010	FM/AM Front end, P.C. Board
R101	RC10104120	100Kohm ±10% 1/2W, Carbon Film
R102	RC10105120	1Mohm ±10% 1/2W, Carbon Film
R103	RC10101120	100ohm ±10% 1/2W, Carbon Film
R104	RC10104120	100Kohm ±10% 1/2W, Carbon Film
R105	RC10472120	4.7Kohm ±10% 1/2W, Carbon Film
R106	RC10272120	2.7Kohm ±10% 1/2W, Carbon Film
R107	RC10123120	12Kohm ±10% 1/2W, Carbon Film
R108	RC10102120	1Kohm ±10% 1/2W, Carbon Film
R109	RT10562140	5.6Kohm ±10% 1/4W, Carbon Film
R110	RT10104140	100Kohm ±10% 1/4W, Carbon Film
R111	RT10392140	3.9Kohm ±10% 1/4W, Carbon Film
R112	RT10332140	3.3Kohm +10% 1/4W, Carbon Film
R113	RT10153140	15Kohm ±10% 1/4W, Carbon Film
R114	RT10472140	4.7Kohm ±10% 1/4W, Carbon Film
R115	RT10102140	1Kohm ±10% 1/4W, Carbon Film
R116	RT10473140	47Kohm ±10% 1/4W, Carbon Film
R117	RT10184140	18Kohm ±10% 1/4W, Carbon Film
※C101	CA4330001C	FM 4G, AM 3G, Variable
C102	CT11000010	Trimmer
C103	DD16150010	15PF ±10%, Cer.
C104	DD16201010	200PF ±10%, Cer.
C105	DD10010010	1PF ±0.25PF, Cer.
C106	DK17102010	.001uF ±20%, Cer.
C107	CT11000010	Trimmer
C108	DD16200010	20PF ±10%, Cer.
C109	DD10010010	1PF ±0.25PF, Cer.
C110	DD16200010	20FF ±10%, Cer.
C111	CT11000010	Trimmer
C112	DK17102010	.001uF ±20%, Cer.
C113	DK17102010	.001uF ±20%, Cer.
C114	DK17103010	.01uF ±20%, Cer.
C115	DK17103010	.01uF ±20%, Cer.
C116	DK17102010	.001uF ±20%, Cer.
C117	DD12100060	10PF, Cer.
C118	DD11050020	5PF, Cer.
C119	CT11000010	Trimmer
C120	DD16200040	20PF N470, Cer.
C121		With VC, Trimmer
C122	DD12050010	5PF ±1PF, Cer.
C123	DK18403010	.04uF +100%, −0%, Cer.
C124	DK18403010	.04uF +100%, −0%, Cer.
C125	DD12070010	7PF ±1PF, Cer.
C126		With V. C. Trimmer
C127	DF17472010	.0047uF ±20%, Mylar
C128	DD16250010	25PF ±10%, Cer.
C129		With V. C. Trimmer
C130	DF17223010	.022uF ±20%, Mylar
C131	DF65451010	450PF ±5%, Mylar
C132	ED10601020	10uF 10V, Elect.
H101	HF200191A0	2SK19Y, Transistor
H102	HF200191B0	2SK19(Gn), Transistor

REF. DESIG.	MARANTZ PART NO.	DESCRIPTION
H103	HT308291B0	2SC829B, Transistor
H104	HT303711B0	2SC3710, Transistor
H105	HT303711A0	2SC371R, Transistor
H106	HD10001050	1N60, Diode
R118	RT10331140	330ohm ±10% 1/4W, Cer.
R119	RT10683140	68Kohm ±10% 1/4W, Cer.
L101	LA10046130	Ant. coil
L102	LA10046140	RF coil
L103	LA10046150	RF coil
L104	LI14016190	IFT
L105	LC13020010	Choke coil
L106	LO10046020	Osc. coil
L107	LA14010010	RF coil
L108	LO14010020	Osc. coil
L109	LI14010010	IFT
J101	YP10000360	Plug
J102	YP10000360	Plug
J103	YP10000360	Plug
J104	YP10000360	Plug
J105	YP10000360	Plug
J106	YP10000360	Plug
J107	YP10000360	Plug
J108	YP10000360	Plug
J109	YP10000360	Plug
J110	YP10000360	Plug
J111	YP10000360	Plug
J112	YP10000360	Plug
J113	YP10000360	Plug
P200	YD25770022	FM/AM IF-MPX P. C. Board
R201	RT10223140	22K ohm ±10%1/4W, Carbon Film
R202	RT10103140	10K ohm ±10% 1/4W, Carbon Film
R203	RT10102140	1K ohm ±10% 1/4W, Carbon Film
R204	RT10102140	1K ohm ±10%, 1/4W, Carbon Film
R205	RT10223140	22K ohm ±10% 1/4W, Carbon Film
R206	RT10103140	10K ohm ±10% 1/4W, Carbon Film
R207	RT10102140	1K ohm ±10% 1/4W, Carbon Film
R208	RT10020140	222 ohm ±10% 1/4W, Carbon Film
R209	RT10100140	10 ohm ±10% 1/4W, Carbon Film
R210	RT10154140	150K ohm ±10% 1/4W, Carbon Film
R212	RT10102140	1K ohm ±10% 1/4W, Carbon Film
R213	RT10223140	22K ohm ±10% 1/4W, Carbon Film
R214	RT10221140	220 ohm ±10% 1/4W, Carbon Film
R215	RT10100140	10 ohm ±10% 1/4W, Carbon Film
R216	RT10103140	10K ohm ±10% 1/4W, Carbon Film
R217	RT10153140	15K ohm ±10% 1/4W, Carbon Film
R218	RT10102140	1K ohm ±10% 1/4W, Carbon Film
R219	RT10221140	220 ohm ±10% 1/4W, Carbon Film
R220	RT10100140	10 ohm ±10% 1/4W, Carbon Film
R221	RT10821140	820 ohm ±10% 1/4W, Carbon Film
R222	RT10153140	15K ohm ±10% 1/4W, Carbon Film
R223	RT10101140	100 ohm ±10% 1/4W, Carbon Film
R224	RT10221140	220 ohm ±10% 1/4W, Carbon Film
R225	RT10102140	1K ohm ±10% 1/4W, Carbon Film
R226	RT10102140	1K ohm ±10% 1/4W, Carbon Film
R227	RT10332140	3.3K ohm ±10% 1/4W, Carbon Film
R228	RT10332140	3.3K ohm ±10% 1/4W, Carbon Film
R230	RT10101140	100 ohm ±10% 1/4W, Carbon Film
R231	RT10272140	2.7K ohm ±10% 1/4W, Carbon Film
R232	RT10562140	5.6K ohm ±10% 1/4W, Carbon Film
R233	RT10474140	470Kohm ±10% 1/4W, Carbon Film
R234	RT10473140	47K ohm ±10% 1/4W, Carbon Film
R235	RT10223140	22K ohm ±10% 1/4W, Carbon Film
T101	2577109020	Shield
T102	RT10103140	
R236	RT10103140	10K ohm ± 10% 1/4W, Carbon Film
R237	RT10102140	1K ohm ±10% 1/4W, Carbon Film

REF. DESIG.	MARANTZ PART NO.	DESCRIPTION
R238	RT10682140	6.8K ohm ±10% 1/4W, Carbon Film
R239	RT10223140	22K ohm ±10% 1/4W, Carbon Film
R240	RT10223140	22K ohm ±10% 1/4W, Carbon Film
R241	RT10562140	5.6K ohm ±10% 1/4W, Carbon Film
R243	RT10102140	1K ohm ±10% 1/4W, Carbon Film
R244	RT10105140	1M ohm ±10% 1/4W, Carbon Film
R245	RT10152140	1.5K ohm ±10% 1/4W, Carbon Film
R246	RT10103140	10K ohm ±10% 1/4W, Carbon Film
R247	RT10272140	2.7K ohm ±10% 1/4W, Carbon Film
R248	RT10104140	100K ohm ±10% 1/4W, Carbon Film
R249	RT10122140	1.2K ohm ±10% 1/4W, Carbon Film
R250	RT10222140	2.2K ohm ±10% 1/4W, Carbon Film
R251	RT10223140	22K ohm ±10% 1/4W, Carbon Film
R252	RT10331140	330 ohm ±10% 1/4W, Carbon Film
R253	RT10272140	2.7K ohm ±10% 1/4W, Carbon Film
R254	RT10272140	2.7K ohm ±10% 1/4W, Carbon Film
R255	RT10272140	2.7K ohm ±10% 1/4W, Carbon Film
R256	RT10272140	2.7K ohm ±10% 1/4W, Carbon Film
R257	RT10683140	68K ohm ±10% 1/4W, Carbon Film
R258	RT10683140	68K ohm ±10% 1/4W, Carbon Film
R259	RT10683140	68K ohm ±10% 1/4W, Carbon Film
R260	RT10683140	68K ohm ±10% 1/4W, Carbon Film
R261	RT10823140	82K ohm ±10% 1/4W, Carbon Film
R262	RT10823140	82K ohm ±10% 1/4W, Carbon Film
R263	RT10473140	47K ohm ±10% 1/4W, Carbon Film
R264	RT10473140	47K ohm ±10% 1/4W, Carbon Film
R265	RT10682140	6.8K ohm ±10% 1/4W, Carbon Film
R266	RT10682140	6.8K ohm ±10% 1/4W, Carbon Film
R267	RT10122140	1.2K ohm ±10% 1/4W, Carbon Film
R268	RT10122140	1.2K ohm ±10% 1/4W, Carbon Film
R269	RA05020050	5K ohm ±30% (B), Semi Fixed
R270	RT10562140	5.6K ohm ±10% 1/4W, Carbon Film
R271	RT10562140	5.6K ohm ±10% 1/4W, Carbon Film
R272	RT10103140	10K ohm ±10% 1/4W, Carbon Film
R273	RT10103140	10K ohm ±10% 1/4W, Carbon Film
R274	RT10563140	56K ohm ±10% 1/4W, Carbon Film
R275	RT10563140	56K ohm ±10% 1/4W, Carbon Film
R276	RT10122140	1.2K ohm ±10% 1/4W, Carbon Film
R277	RT10122140	1.2K ohm ±10% 1/4W, Carbon Film
R278	RT10223140	22K ohm ±10% 1/4W, Carbon Film
R279	RT10122140	1.2K ohm ±10% 1/4W, Carbon Film
R280	RT10122140	1.2K ohm ±10% 1/4W, Carbon Film
R282	RT10104140	100K ohm ±10% 1/4W, Carbon Film
C201	DK17103010	.01uF ±20%, Cer.
C202	DK17103010	.01uF ±20%, Cer.
C203	DK17103010	.01uF ±20%, Cer.
C204	DK17103010	.01uF ±20%, Cer.
C206	DK17102010	.001uF ±20%, Cer.
C207	DK17103010	.01uF ±20%, Cer.
C208	DK18403010	.04uF +100% −0%, Cer.
C209	DK18403010	.04uF +100% −0%, Cer.
C210	DD16200010	20PF ±10%, Cer.
C211	DK18403010	.04uF +100% −0%, Cer.
C212	DD12030010	3PF ±1PF, Cer.
C213	DD15301020	300PF ±5%, Cer.
C214	DK17102010	.001uF ±20%, Cer.
C215	DK18403010	.04uF +100% −0%, Cer.
C216	DK18104020	0.1uF +80% −20%, Cer.
C217	DD15301020	300PF +5%, Cer.
C218	EA10601620	10uF 16V, Elect.
C220	DK17103010	.01uF ±20%, Cer.
C221	DK18403010	.04uF +100% −0%, Cer.
C222	DK17103010	.01uF ±20%, Cer.
C223	DK17103010	.01uF ±20%, Cer.
C224	DD16501010	500PF ±10%, Cer.
C225	DK17103010	.01uF ±20%, Cer.

REF. DESIG.	MARANTZ PART NO.	DESCRIPTION
C226	DK18403010	.04uF +100% −0%, Cer.
C228	EA47501620	4.7uF 16V, Elect.
C229	DD16201010	200PF ±10%, Cer.
C230	DD16201010	200PF ±10%, Cer.
C231	DD16201010	200PF ±10%, Cer.
C232	DK17103010	.01uF ±20%, Cer.
C233	EM10402510	.1uF 25V, Elect.
C235	DK17103010	.01uF ±20%, Cer.
C236	DD16201010	200PF ±10%, Cer.
C237	DK17103010	.01uF ±20%, Cer.
C238	DK17103010	.01uF ±20%, Cer.
C239	EA10601620	10uF 16V, Elect.
C240	DK18403010	.04uF +100% −0%, Cer.
C241	EA22701640	220uF 16V, Elect.
C242	ED47501020	4.7uF 10V, Elect.
C243	DF55472010	.0047uF ±5%, Poly
C244	ED10601020	10uF 10V, Elect.
C245	DF55472010	.0047uF ±5%, Poly
C246	DF55472010	.0047uF ±5%, Poly
C248	EA10601620	10uF 16V, Elect.
C249	DF55472010	4700PF ±5%, Poly
C250	DF16152010	.0015uF ±10%, Mylar
C251	ED47501020	4.7uF 10V, Elect.
C252	ED47501020	4.7uF 10V, Elect.
C253	DF17223010	.02uF ±20%, Mylar
C254	DF17223010	.02uF ±20%, Mylar
C255	EA47501620	4.7uF 16V, Elect.
C256	EA47501620	4.7uF 16V, Elect.
C257	EA10601620	10uF 16V, Elect.
C258	EA10601620	10uF 16V, Elect.
C260	DF16332010	.0033uF ±10%, Mylar
C261	DF16332010	.0033uF ±10%, Mylar
C262	DF16332010	.0033uF ±10%, Mylar
C263	DF16332010	.0033uF ±10%, Mylar
C264	DF16332010	.0033uF ±10%, Mylar
C265	DF65821010	820PF ±5%, Mylar
C266	DF65821010	820PF ±5%, Mylar
C268	EA10701630	100uF 16V, Elect.
C270	EA10601620	10uF 16V, Elect.
C271	ED10700620	100uF 6V, Elect.
H201	HT303801A0	2SC380 R, Transistor
H202	HT303801B0	2SC380 O, Transistor
H203	HT303801C0	2SC380 O, Transistor
H204	HT303801B0	2SC380 Y, Transistor
H205	HC10001090	LA703E JRC, IC
H206	HT303801B0	2SC380 O, Transistor
H207	HT30373100	2SC373, Transistor
C259	DF16332010	.0033uF ±10%, Mylar
H208	HT30373100	2SC373, Transistor
H209	HT30733100	2SC733 Gn, Transistor
H210	HT30373100	2SC373, Transistor
H211	HT30373100	2SC373, Transistor
H212	HT30373100	2SC373, Transistor
H213	HT30373100	2SC373, Transistor
H214	HT306442A0	2SC644 S or T, Transistor
H215	HT306442A0	2SC644 S or T, Transistor
H216	HD10001050	1N60, Diode
H217	HD10001050	1N60, Diode
H218	HD10001050	1N60, Diode
H219	HD10001050	1N60, Diode
H220	HD10001050	1N60, Diode
H221	HD10001050	1N60, Diode
H222	HD10001050	1N60, Diode
H224	HD10001050	1N60, Diode
H225	HD10001050	1N60, Diode
H226	HD10001050	1N60, Diode

REF. DESIG.	MARANTZ PART NO.	DESCRIPTION
H227	HD10001050	1N60, Diode
H228	HD10001050	1N60, Diode
※H229	HD30010090	IS336, Diode
H230	HD10001050	IN60, Diode
L201	LI14016180	FM IFT, IFT
L202	LI14016120	FM IFT, IFT
L203	LI14016060	FM IFT, IFT
L204	LI14016043	FM IFT (Det.), IFT
L205	LI14010040	AM IFT, IFT
L206	LI14010050	AM IFT, IFT
L208	LI10156060	FM IFT, IFT
L209	LS10010010	19KC Coil, MPX Coil
L210	LS10010020	19KC Coil, MPX Coil
L211	LS10010030	38KC Coil, MPX Coil
L212	LS10010050	67KC Coil (Trap), MPX Coil
L213	LC22260010	19KC Coil (Trap), Choke Coil
L214	LC22260010	19KC Coil (Trap), Choke Coil
L215	LS10010060	38KC Coil (Trap), MPX Coil
L216	LS10010060	38KC Coil (Trap), MPX Coil
J201	YP10000360	Plug
J202	YP10000360	Plug
J203	YP10000360	Plug
J204	YP10000360	Plug
J205	YP10000360	Plug
J206	YP10000360	Plug
J207	YP10000360	Plug
J208	YP10000360	Plug
J209	YP10000360	Plug
J210	YP10000360	Plug
J211	YP10000360	Plug
J212	YP10000360	Plug
J213	YP10000360	Plug
J214	YP10000360	Plug
J215	YP10000360	Plug
J216	YP10000360	Plug
J217	YP10000360	Plug
J218	YP10000360	Plug
J219	YP10000360	Plug
J220	YP10000360	Plug
J221	YP10000360	Plug
H231	HD10001050	IN60 Diode
J231	YP10000010	Plug
W201	YW26560010	Wire Material
P300	YD25770030	Phono amp. P. C. Board
R301	RN10473140	47K ohm ±10% 1/4W, Carbon Film
R302	RN10473140	47K ohm ±10%, 1/4W, Carbon Film
R303	RT10391140	390 ohm ±10% 1/4W, Carbon Film
R304	RT10391140	390 ohm ±10% 1/4W, Carbon Film
R305	RN10334140	330K ohm ±10% 1/4W, Carbon Film
R306	RN10334140	330K ohm ±10%,1/4W, Carbon Film
R307	RT10561140	560 ohm ±10% Carbon Film
R308	RT10561140	560 ohm ±10% 1/4W, Carbon Film
R309	GT05334120	330K ohm ±5% 1/2W, Carbon Film
R310	GT05334120	330K ohm ±5% 1/2W, Carbon Film
R311	GT05273120	27K ohm ±5% 1/2W, Carbon Film
R312	GT05273120	27K ohm ±5% 1/2W, Carbon Film
R313	RN10104140	100K ohm ±10% 1/4W, Carbon Film
R314	RN10104140	100K ohm ±10% 1/4W, Carbon Film
R315	RT10223140	22K ohm ±10%, 1/4W, Carbon Film
R316	RT10822140	8.2K ohm ±10% 1/4W, Carbon Film
R317	RT10822140	8.2K ohm ±10% 1/4W, Carbon Film
R318	RT05152140	1.5K ohm ±50% 1/4W, Carbon Film
R319	RT05152140	1.5K ohm ±50% 1/4W, Carbon Film
R320	RT10471140	470 ohm ±10% 1/4W, Carbon Film
R321	RT10471140	470 ohm ±10% 1/4W, Carbon Film
R322	RT10101140	100 ohm ±10% 1/4W, Carbon Film

REF. DESIG.	MARANTZ PART NO.	DESCRIPTION
R323	RN10224140	220K ohm ±10% 1/4W, Carbon Film
R324	RN10224140	220K ohm ±10% 1/4W, Carbon Film
C301	EV22502510	2.2uF 25V +40% −20%, Elect.
C302	EV22502510	2.2uF 25V, +40% −20%, Elect.
C303	EA22603510	22uF 35V Elect.
C304	DF64103010	0.01uF 50V ±2%, Mylar
C305	DF64103010	0.01uF 50V ±2%, Mylar
C306	DF64272010	0.0027uF 50V ±2%, Mylar
C307	DF64272010	0.0027uF 50V ±2%, Mylar
C308	EA10601620	10uF 16V, Elect.
C309	EA10601620	10uF 16V, Elect.
C310	EV33502520	3.3uF 25V +40% −20%, Elect.
C311	EV33502520	3.3uF 25V +40% −20%Elect.
C312	EA47603520	47uF 35V Elect.
H301	HT306441C0	2SC644 (T), Transistor
H302	HT306441C0	2SC644 (T), Transistor
H303	HF200301C0	2SK30 (Y), Transistor
H304	HF200301C0	2SK30 (Y), Transistor
J301	YP10000360	Plug
J302	YP10000360	Plug
J303	YP10000360	Plug
J304	YP10000360	Plug
J305	YP10000360	Plug
J306	YP10000360	Plug
J307	YP10000360	Plug
J308	YP10000360	Plug
P400	YD25770040	Tone AMP, P. C. Board
R401	RT10391140	390 ohm ±10% 1/4W, Carbon Film
R402	RT10391140	390 ohm ±10% 1/4W, Carbon Film
R403	RN10393140	39K ohm ±10% 1/4W, Carbon Film
R404	RN10393140	39K ohm ±10% 1/4W, Carbon Film
R405	RN10563140	56K ohm ±10% 1/4W, Carbon Film
R406	RN10563140	56K ohm ±10% 1/4W, Carbon Film
R407	RT10332140	3.3K ohm ±10% 1/4W, Carbon Film
R408	RT10332140	3.3Kohm ±10% 1/4W, Carbon Film
R409	RN10223140	22K ohm ±10% 1/4W, Carbon Film
R410	RN10223140	22K ohm ±10% 1/4W, Carbon Film
R411	RT10222140	2.2K ohm ±10% 1/4W, Carbon Film
R412	RT10222140	2.2K ohm ±10% 1/4W, Carbon Film
R413	RT10102140	1K ohm ±10% 1/4W, Carbon Film
R414	RT10102140	1K ohm ±10% 1/4W, Carbon Film
R415	RN10153140	15K ohm ±10% 1/4W, Carbon Film
R416	RN10153140	15K ohm ±10%1/4W, Carbon Film
R417	RT10101140	100 ohm ±10% 1/4W, Carbon Film
R418	RN10563140	56K ohm ±10% 1/4W, Carbon Film
R419	RN10563140	56K ohm ±10% 1/4W, Carbon Film
R420	RN10153140	15K ohm ±10% 1/4W, Carbon Film
R421	RN10153140	15K ohm ±10% 1/4W, Carbon Film
R422	RN10225140	2.2M ohm ±10% 1/4W, Carbon Film
R423	RN10225140	2.2M ohm ±10% 1/4W, Carbon Film
R424	RN10683140	68K ohm ±10% 1/4W, Carbon Film
R425	RN10683140	68K ohm ±10% 1/4W, Carbon Film
R426	RT10103140	10K ohm ±10% 1/4W, Carbon Film
R427	RT10103140	10K okm ±10% 1/4W, Carbon Film
R428	RT10103140	10K ohm ±10% 1/4W, Carbon Film
R429	RT10103140	10K ohm ±10% 1/4W, Carbon Film
R430	RT10221140	220 ohm ±10% 1/4W, Carbon Film
R431	RT10221140	220 ohm ±10% 1/4W, Carbon Film
C401	DF17224020	0.22uF 50V ±20%, Elect.
C402	DF17224020	0.22uF 50V ±20%, Elect.
C403	EA10601620	10uF 16V Elect.
C404	EA10601620	10uF 16V Elect.
C405	EA10603510	10uF 35V, Elect.
C406	EA10603510	10uF 35V Elect.
C407	EV10502510	1uF 25V +40% −20%, Elect.
C408	EV10502510	1uF 25V +40% −20%, Elect.

REF. DESIG.	MARANTZ PART NO.	DESCRIPTION
C409	EA47603520	47uF 35V Elect.
C410	EV22502510	2.2uF 25V +40% −20%, Elect.
C411	EV22502510	2.2uF 25V +40% −20%, Elect.
C412	DF65351010	350PF ±5% Poly
C413	DF65351010	350PF ±5%, Poly
C414	EV47402510	0.47uF 25V ±40%,−20%,Elect.
C415	EV47402510	0.47uF 25V ±40%,−20%,Elect.
H401	HT304582A0	2SC4580LG, Transistor
H402	HT304582A0	2SC4580LG, Transistor
H403	HT104942A0	2SA494-Y or GR, Transistor
H404	HT104942A0	2SA494-Y or GR, Transistor
H405	HT306442A0	2SC644 S or T, Transistor
H406	HT306442A0	2SC644 S or T, Transistor
H407	HT104942A0	2SA494-Y-X, Transistor
J401	YP10000360	Plug
J402	YP10000360	Plug
J403	YP10000360	Plug
J404	YP10000360	Plug
J405	YP10000360	Plug
J406	YP10000360	Plug
J407	YP10000360	Plug
J408	YP10000360	Plug
J409	YP10000360	Plug
J410	YP10000360	Plug
J412	YP10000360	Plug
J413	YP10000360	Plug
J414	YP10000360	Plug
J415	YP10000360	Plug
J416	YP10000360	Plug
J417	YP10000360	Plug
J418	YP10000360	Plug
J419	YP10000360	Plug
J420	YP10000360	Plug
W401	YW26560020	Wire Materials
P500	YD25770050	Main Amp, P. C. Board
R501	RN10473140	47K ohm ±10% 1/4W, Carbon Film
R502	RN10473140	47K ohm ±10% 1/4W, Carbon Film
R503	GT05102120	1K ohm ±5% 1/2W, Carbon Film
R504	GT05102120	1K ohm ±5% 1/2W, Carbon Film
R505	GT05102120	1K ohm ±5% 1/2W, Carbon Film
R506	GT05102120	1K ohm ±5% 1/2W, Carbon Film
R507	GT05223120	22K ohm ±5% 1/2W, Carbon Film
R508	GT05223120	22K ohm ±5% 1/2W, Carbon Film
R509	RA01030070	10K ohm, Semi Fix
R510	RA01030070	10K ohm, Semi Fix
R511	RC10182120	1.8K ohm ±10% 1/2W, Solid
R512	RC10182120	1.8K ohm ±10% 1/2W, Solid
R513	RC10182120	1.8K ohm ±10% 1/2W, Solid
R514	RC10182120	1.8K ohm ±10% 1/2W, Solid
H408	HT104942A0	2SA494-Y or Gr, Transistor
R515	GT05471120	470 ohm +5% 1/2W, Carbon Film
R516	GT05471120	470 ohm ±5% 1/2W, Carbon Film
R517	GT05681120	680 ohm ±5% 1/2W, Carbon Film
R518	GT05681120	680 ohm ±5% 1/2W, Carbon Film
R519	GT05391120	390 ohm ±5% 1/2W, Carbon Film
R520	GT05391120	390 ohm ±5% 1/2W, Carbon Film
R521	GT05133120	13K ohm ±5% 1/2W, Carbon Film
R522	GT05133120	13K ohm ±5% 1/2W, Carbon Film
R523	GT05822120	8.2K ohm ±5% 1/2W, Carbon Film
R524	GT05822120	8.2K ohm ±5% 1/2W, Carbon Film
R525	GT05223120	22K ohm ±5% 1/2W, Carbon Film
R526	GT05223120	22K ohm ±5% 1/2W, Carbon Film
R527	GT05680120	68 ohm ±5% 1/2W, Carbon Film
R528	GT05680120	68 ohm ±5% 1/2W, Carbon Film
R529	GT05680120	68 ohm ±5% 1/2W, Carbon Film
R530	GT05680120	68 ohm ±5% 1/2W, Carbon Film

REF. DESIG.	MARANTZ PART NO.	DESCRIPTION
R531	RC10101120	100 ohm ±5% 1/2W, Carbon Film
R532	RC10101120	100 ohm ±5% 1/2W, Carbon Film
R533	RC10101120	100 ohm ±5% 1/2W, Carbon Film
R534	RC10101120	100 ohm ±10% 1/2W, Solid
R535	RC10470120	47 ohm ±10% 1/2W, Solid
R536	RC10470120	47 ohm ±10% 1/2W, Solid
R537	RC10470120	47 ohm ±10% 1/2W, Solid
R538	RC10470120	47 ohm ±10% 1/2W, Solid
R539	RC10101120	100 ohm ±10% 1/2W, Solid
R540	RC10101120	100 ohm ±10% 1/2W, Solid
R541	RC10101120	100 ohm ±10% 1/2W, Solid
R542	RC10101120	100 ohm ±10% 1/2W, Solid
R543	RC10100120	10 ohm ±10% 1/2W, Solid
R544	RC10100120	10 ohm ±10% 1/2W, Solid
R545	RC10100120	10 ohm ±10% 1/2W, Solid
R546	RC10100120	10 ohm ±10% 1/2W, Solid
R547	GW10242020	0.24 ohm ±10% 2W, Carbon Film
R548	GW10242020	0.24 ohm ±10% 2W, Carbon Film
R549	GW10242020	0.24 ohm ±10% 2W, Carbon Film
R550	GW10242020	0.24 ohm ±10% 2W, Carbon Film
R551	RA01020010	1K ohm B, Semi Fix
R552	RA01020010	1K ohm B, Semi Fix
C501	DF27105500	1uF ±20% 100V, Mylar
C502	DF27105500	1uF ±20% 100V, Mylar
C503	DF36560500	56PF ±10% 500V, Mica
C504	DF36560500	56PF ±10% 500V, Mica
C505	DK18303010	0.03uF +100% −0%, 50V Cer.
C506	DK18303010	0.03uF +100% −0%, 50V Cer.
C507	DK18303010	0.03uF +100% −0%, 50V Cer.
C508	DK18303010	0.03uF +100% −0%, 50V Cer.
C509	DF17104520	0.1uF ±20% 200V, Mylar
C510	DF17104520	0.1uF ±20% 200V, Mylar
C511	DF17104520	0.1uF ±20% 200V, Mylar
C512	DF17104520	0.1uF ±20% 200V, Mylar
C513	DD12100010	10PF ±1PF 50V, Cer.
C514	DD12100010	10PF ±1PF 50V, Cer.
R553	RN10224140	220K ohm ±10% 1/4W, Carbon Film
R554	RN10224140	220K ohm ±10% 1/4W, Carbon Film
J501	YP10000360	Plug
J502	YP10000360	Plug
J503	YP10000360	Plug
J504	YP10000360	Plug
J505	YP10000360	Plug
J506	YP10000360	Plug
J507	YP10000360	Plug
J508	YP10000360	Plug
J509	YP10000360	Plug
J510	YP10000360	Plug
J511	YP10000360	Plug
J512	YP10000360	Plug
J513	YP10000360	Plug
J514	YP10000360	Plug
J515	YP10000360	Plug
J516	YP10000360	Plug
J517	YP10000360	Plug
J518	YP10000360	Plug
J519	YP10000360	Plug
J520	YP10000360	Plug
521	YP10000360	Plug
22	YP10000360	Plug
23	YP10000360	Plug
524	YP10000360	Plug
J525	YP10000360	Plug
J526	YP10000360	Plug
J527	YP10000360	Plug
H501	HC10002170	Motorola (MC1741G), IC

REF. DESIG.	MARANTZ PART NO.	DESCRIPTION
H502	HC10002170	Motorola (MC1741G), IC
H503	HT105621B0	2SA562 O, Transistor
H504	HT105621B0	2SA562 O, Transistor
H505	HT303711B0	2SC371 O, Transistor
H506	HT303711B0	2SC371 O, Transistor
H507	HT104972A0	2SA497 R, Transistor
H508	HT104972A0	2SA497 R, Transistor
H509	HT304972A0	2SC497 R, Transistor
H510	HT304972A0	2SC497 R, Transistor
H511	HT304972B0	2SC497 R or O, Transistor
H512	HT304972B0	2SC497 R or O, Transistor
H513	HT104972B0	2SA497R or O, Transistor
H514	HT104972B0	2SA497R or O, Transistor
H515	HD30011090	IS198-T14.5 400 mW, Diode
H516	HD30011090	IS198-T14.5 400 mW, Diode
H517	HD50011090	IS198-T14.5 400 mW, Diode
H518	HD10009090	IS198-T14.5 400 mW, Diode
※H002	HT70003100	Motorola PNP. SJ2009, Transistor
※H003	HT70003100	Motorola PNP. SJ2009, Transistor
※H004	HT90003100	Motorola NPN. SJ2008, Transistor
※H005	HT90003100	Motorola NPN. SJ2008 Transistor
P600	YD25770060	Power supply, P.C. Board
R601	RC10153120	15K ohm ±10% 1/2W, Solid
R602	RA01030010	10K ohm B, Semi Fix
R603	RC10562120	5.6K ohm ±10% 1/2W, Solid
R604	RC10821120	820 ohm ±10% 1/2W, Solid
R605	RC10500120	50 ohm ±10% 1/2W, Solid
R606	RC10821120	820 ohm ±10% 1/2W, Solid
R607	RC10750120	75 ohm ±10% 1/2W, Solid
R608	RC10391010	390 ohm ±10% 1W, Solid
R609	GS10022020	2.2 ohm ±10% 2W, Carbon Film
R610	GS10022020	2.2 ohm ±10% 2W, Carbon Film
R611	GS10240020	24 ohm ±10% 2W, Carbon Film
R612	GS10240020	24 ohm ±10% 2W, Carbon Film
C602	EA10603510	10uF 35V, Elect.
C603	ED47703510	470uF 35V, Elect.
C604	ED47703510	470uF 35V, Elect.
C605	ED47703510	470uF 35V, Elect.
C606	ED47703510	470uF 35V, Elect.
C607	EA47701620	470uF 16V, Elect.
C608	DF17104520	0.1uF ±20% 150V, M. P.
C609	DF17104520	0.1uF ±20% 150V, M. P.
C610	EA47603520	47uF 35V, Elect.
※H601	HT30373100	2SC373, Transistor
※H602	HT309842A0	2SC984 C or D, Transistor
H603	HD30003090	1S332, Diode
H604	HD20003010	HR-5A, Diode
H605	HD20003010	HR-5A, Diode
H606	HD20003010	HR-5A, Diode
H607	HD20003010	HR-5A, Diode
H608	HD20003010	HR-5A, Diode
J601	YP10000360	Plug
J602	YP10000360	Plug
J603	YP10000360	Plug
J604	YP10000360	Plug
J605	YP10000360	Plug
J606	YP10000360	Plug
J607	YP10000360	Plug
J608	YP10000360	Plug
J610	YP10000360	Plug
J611	YP10000360	Plug
J612	YP10000360	Plug
J613	YP10000360	Plug
J614	YP10000360	Plug
J615	YP10000360	Plug
J616	YP10000360	Plug

DESIG.	MARANTZ PART NO.	DESCRIPTION
J617	YP10000360	Plug
J618	YP10000360	Plug
J619	YP10000360	Plug
J620	YP10000360	Plug
P700	YD25770070	Comp. circuit, P.C.Board
C701	DF17224020	0.22uF ±20% 150V, Mylar
C702	DF17224020	0.22uF ±20% 150V, Mylar
H701	HV00002050	M8513 O, Varistor
H702	HV00002050	M8513 O, Varistor
H703	HV00002050	M8513 O, Varistor
H704	HV00002050	M8513 O ,Varistor
P800	YD26560010	Switch, P. C. Board
R801	RT10272140	2.7K ohm ±10% 1/4W, Carbon Film
R802	RT10272140	2.7K ohm ±10% 1/4W, Carbon Film
R803	RT10273140	27K ohm ±10% 1/4W, Carbon Film
R804	RT10273140	27K ohm ±10% 1/4W, Carbon Film
R805	RT10222140	2.2K ohm ±10% 1/4W, Carbon Film
R806	RT10222140	2.2K ohm ±10% 1/4W, Carbon Film
C611	ED47703510	470uF 35V, Elect.
R807	RN10474140	470K ohm ±10% 1/4W, Caron Film
R808	RN10474140	470K ohm ±10% 1/4W, Caron Film
C801	DF17104020	0.1uF ±20%, Mylar
C802	DF17104020	0.1uF ±20%, Mylar
C803	DF17102010	0.001uF ±20%, Mylar
C804	DF17102010	0.001uF ±20%, Mylar
C805	DF17473010	0.047uF ±20%, Mylar
C806	DF17473010	0.047uF ±20%, Mylar
※S801	SP04020012	Push Switch
P940	YD25780100	Tone Control, P·C·Board
※R941	RD01040010	100K ohm (B) Treble, Variable
R942	RD01040010	100K ohm (B) Bass Variable
R943 -R946	GT05163120	16K ohm ±5% 1/2W, Carbon Film
C941 -C944	DF16223010	0.022uF ±10%, Mylar
J941 -J948	57219520W 0	Lug Eyelet
R001	RK02030160	Muting 20K (B), Variable Resist. or
R002	RC10152120	1.5K ohm ±10% 1/2W, solid
R003	RT10103140	10K ohm ±10% 1/4W, Carbon Film
R004	RT10103140	10K ohm ±10% 1/4W, Carbon Film
R005	RM05030190	Balance 50K Mn, Variable
※R006	RM05030220	Volume 50K (A) 40% Tap, Variable
R007	RC10471120	470 ohm ±10% 1/2W, solid
R008	RC10471120	470 ohm ±10% 1/2W, solid
R009	RT10152010	1.5K ohm ±10% 1W, Carbon Film
R010	RT10152010	1.5K ohm ±10% 1W, Carbon Film
R011	RT10225010	2.2M ohm ±10% 1W, Carbon Film
R012	RC10680120	68 ohm ±5% 1/2W, solid
R013	RC10680120	68 ohm ±5% 1/2W, solid
R014	RC10082120	8.2 ohm ±5% 1/2W, solid
C001	ED33600610	33uF 6.3V, Elect.
C002	EC47805010	4700uF 50V, Elect.
C003	EC47805010	4700uF 50V, Elect.
C004	DK18103510	0.01uF 250W ±20%, MP Cap
C005	DK18103510	0.01uF 250W ±20%, MP Cap
C006	DO07473530	0.047uF ±20% AC450V (UL), Oil-Paper Cap.
H001	HD20005100	5B2, Diode
※S001	SP04020012	Push Switch
※S002	SP04020012	Push Switch
※S003	SR05040010	Function, Rotary Switch
S004	SS02020170	For FM-Ant Attenuator, Slide Switch
※S005	SP04010062	For AC Supply, Push Switch
※L001	LF11400390	Ant Coil (MW)
L002	TS19601020	Power Transf.
L003	LC21020010	2μH Core FC5027001-0, Choke Coil
L004	LC21020010	Choke Coil
L005	LB30075250	Balun
※M001	IM11036020	DC Meter
※M002	IN10080010	For Stereo Indicater, Lamp
※M003	IN10060030	For Dial Illumination, Lamp
※M004	IN10060030	For Dial Illumination, Lamp
※M005	IN10060030	For Dial Illumination, Lamp
※M006	IN10060030	For Dial Illumination, Lamp
※M007	IN10080010	For Meter Illumination Lamp
J001 -J003	YT03040030	Terminal
J004	YT02080020	Terminal
J005	YT01010030	Terminal
J006	YJ02000070	Socket
J007	YJ02000510	Socket
J008	YJ02000520	Socket
J009	YJ02000530	Socket
J010	YJ02000470	Socket
J011	YJ02000070	Socket
J012	YJ01000550	Socket
J013 -J014	YJ04000320	Socket
J015	YL01030010	Terminal
J016 -J017	YL01030030	Terminal
J018	YL01030010	Terminal
J021 -J024	YJ05000130	Socket
W001	YC02400010	For AC Source, AC Power Cord
W002	YW26560030	Wire Materials
F001	FR10310010	3.15A, Circuit Breaker
W003	YX26560010	Wire Materials
D110	62031650W0	Lug
D111	54050300R0	T. L. Washer OR
D112	53110303E9	Hexagon Nut
D114	54040302N0	Spring Washer
D115	54040302N0	Spring Washer
D223	54040402N0	Spring Washer
D224	54040402N0	Spring Washer
D225	53110303E9	Hexagon Nut
C272	EA22601610	22uF 16V Elect.
C133	DK18403020	0.04uF +100% −0% Cer.
R118	RT10331140	330 ohm ±10% 1/4W Carbon Film
R119	RT10683140	68K ohm ±10% 1/4W Carbon Film
R553	RN10224140	220K ohm ±10% 1/4W Carbon Film
R554	RN10224140	220K ohm ±10% 1/4W Carbon Film
T501 -T508	2577267020	Heat Sink for 2SA, 2SC497
T509 -T516	2577118060	Spacer for 2SA, 2SC497
C007	DK17103010	0.01uF ±20% Cer.